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THE PREHISTORIC ISLAND LANDSCAPES OF SCILLY

VOLUME I

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ABSTRACT

The Isles of Scilly are located 48km south-west of Lands End, Cornwall, and comprise a small archipelago of granite islands. The interpretation of the islands' archaeology has received no recent detailed consideration and has therefore not been studied within a contemporary archaeological framework. This research seeks to redress this by considering the prehistory of Scilly from the earliest evidence for a human presence on the islands until the end of the 1st century BC (Mesolithic until Iron Age). It will draw upon recent approaches to the study of landscapes, seascapes and islands and from within archaeology and anthropology, as well as other approaches developed within the broader social sciences.

The study will provide the first detailed chronological framework for Scillonian prehistory and will reconsider evidence for the prehistoric environmental background of the islands. The analysis of the archaeological record of the islands will be based upon data collected through fieldwork and from published and unpublished sources. The archaeology will be examined through a detailed study of the distribution and configuration of prehistoric settlements, monuments and material culture and their significance within the island landscape. Exploring changes and continuities within the archaeological record of the islands the study will provide insights into how prehistoric societies may have transformed and sustained their use and perception of the island landscape.

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1. INTRODUCTION AND RESEARCH OUTLINE

1.1 Introduction

The Isles of Scilly are located 48km south-west of Lands End, Cornwall (49°56′N 6°18′W) and comprise a small archipelago of granite islands (Figs.1.1 and 1.2). The interpretation of the islands archaeology has received no detailed consideration since the work of Ashbee (1974) and Thomas (1985) and has therefore not been studied within a contemporary archaeological framework. This research aims to redress this by considering the prehistory of the islands from the earliest evidence of a human presence until the end of the 1st Century BC (Mesolithic until Late Iron Age).

This research will explore the prehistoric social production of the landscapes and seascapes of Scilly. My research will consider the landscape settings and architectural configurations of settlements and monuments and the role played by these cultural constructions in structuring perception of the island landscape. I will argue that the sea was not merely a symbolic backdrop for activity on the land, but was central to the daily lives of prehistoric islanders. I will demonstrate that knowledge of the sea and land are intimately linked and that only by studying the archipelago from the sea – through journeys made within the seascape – can we begin to appreciate the relationship between the natural and constructed environment. Through the identification of: entry points into the archipelago, landing places, routes taken within the seascape and wayfaring skills, relationships between movement on the sea and cultural and natural features of the landscape will be assessed.

This research will draw from a battery of theoretical and methodological approaches to the study of landscape and seascape from within archaeology and anthropology (Bender 1993;

Cordell 1989; Hirsch and O'Hanlon 1995; Tilley 1994), as well as approaches to the study of architectural space developed within the broader social sciences (Gregory and Urry 1985; Soja 1989; Tuan 1979).

Since the early 1990s, landscape has been the focus of renewed interest within British prehistory (Bender 1993; Parker Pearson and Ramilisonina 1998; Thomas 1993b; Tilley 1994; Ucko and Layton 1999a); the Cartesian rationalism that characterised much of the traditional studies has been replaced by a concern with the role of meaning and tradition. Traditionally, studies have concentrated on areas of lowland Britain, and most notably the chalk lands of Wessex (Barrett and Bradley and Green 1991; Thomas 1991, 1993b). The issues that these studies have raised (e.g. post-holed architecture and arable farming) have come to dominated our impression of British prehistory and have been uncritically applied outside of central southern Britain (Barclay 2001). The issues that emerge from Wessex, bear only limited relevance to the very different issues raised by the study of the stony granitic environments of south-west Britain and even less to the study of an island. More recently the scope of British landscape archaeology has moved beyond Wessex, providing a range of regional and area studies (Cummings and Fowler 2004; Cummings and Pannett 2005; Edmonds 2001; Johnston 2005). Of particular importance here is landscape studies upon the granite uplands of south-west Britain (Bender et.al 1995, 1997). The granite uplands of south-west Britain (such as Bodmin Moor, Penwith and Dartmoor) are closer geographically and culturally to Scilly, they are not true islands (although they may be metaphorical ones). This research will add to these landscape studies through the consideration of both the landscape and seascape of Scilly.

My research will consider evidence for prehistoric Scillonian settlement, monuments and material culture. Dichotomies such as those between ritual and everyday, cultural and natural, which dominate archaeological discourse, will be major considerations. Likewise, by not focusing upon one chronological period, such as the Neolithic, many of the pitfalls of compartmentalisation inherent within the three-age system will be avoided. The prehistory of the islands will be studied as a continuum of social and spatial production with space, and hence landscape, seen as a dynamic medium through which prehistoric people lived, experienced and ordered their world.

Spatial and social changes identified will be interpreted as a socio-geography rather than as the product of abstract chronological periods. This cumulative process of the working and reworking of landscape is essential in order to understand how each monument or settlement constructed was situated within an already established biography of place or 'ancestral geography' (Edmonds 1999). In this context, space is considered as socially constituted and, as such, a material manifestation of *habitus* (Bourdieu 1977).

My research will explore the distribution and configuration of prehistoric settlements, monuments and material culture. Through the study of this spatial organisation, changes and continuities will be sought in order to provide insights into how prehistoric societies may have transformed and sustained their use of the island landscape. The analysis of the archaeological record of Scilly will be based upon data collected through fieldwork and from published and unpublished sources. The research will examine how, through the construction of monuments and settlement, landscape becomes layered with meaning and significance and that through the engagement of people, ideas of place and identity become part of a 'taskscape' of daily practice (Ingold 1993).

Although the study of islands has a long history within British prehistory, the concepts and approaches developed within, island archaeology elsewhere has not been addressed. Consequently, island landscapes within British prehistory are treated as if they were the same as those of the mainland (Branigan 2002; Renfrew 1973, 1979). This research aims to redress this through the adoption of an island perspective advocating a rethinking of the premise, agendas and methods that have been adopted within British prehistory for the study of island landscapes.

Landscape archaeology is involved with defining scales of analysis that question where the boundaries of an individual landscape should be drawn. The landscape does not end, but of necessity within archaeological analysis arbitrary boundaries, such as the limits of a settlement, the edge of a moor or a county boundary, need to be defined. Such boundaries inevitably create a specific way of looking at the landscape, looking inwards from the perimeters of a predefined area. However, when the focus of study is a small group of islands, like Scilly, the 'viewpoint' is different. The coastline of the island would seem to form a finite study area. Historical and ethnographic evidence shows that this need not be the case (Akimichi 1996; Cordell 1989; Davies 1989; Gosden and Pavlides 1994). Such studies demonstrate that the sea, rather than being a neutral or alien medium can, like the land, be imbued with social significance and meaning. In this way, I will argue that island landscapes force us to look outwards from our perceived boundaries and consider the seascape as an integral part of the islandscape (Broodbank 2000). The seascape can be seen to share many of the attributes of landscape in that it is socially constructed and subjected to appropriation and contestation. Equally, such a seascape may comprise named places, mythologies, biographies, and social networks (Gaffin 1997). This study will argue that the seascape was not merely a neutral backdrop for human action but was an active medium through which prehistoric communities lived, experienced and ordered their world.

1.2 Outline of research

Chapters 2 and 3 will set the scene of our current state of archaeological knowledge for Scilly and suggest new approaches to the study of island landscapes. Chapter 2 will provide a critical history of previous studies of Scillonian prehistory, summarising the current state of knowledge and outlying the main themes and paradigms that have dominated Scillonian archaeology to date. As such, this chapter will argue the need for the archaeological record of the islands to be reconsidered in light of recent approaches to the study of prehistoric landscape, in particular island landscapes.

Theoretical and practical approaches to landscape archaeology will be discussed in Chapter 3. These approaches will be critically assessed in order to examine their validity and appropriateness for the study of the Scillonian island landscape. It will be argued that the study of British and specifically Scillonian island landscapes necessitates a reworking of such theories and concepts in light of approaches developed within island archaeology elsewhere.

The following chapters (4 and 5) aim to create a temporal and environmental framework through which the study of the island landscape of Scilly may be examined. The configuration and appearance of the Isles of Scilly has undergone considerable environmental change due to rising Holocene sea-levels and the combined effects of coastal erosion and deposition. Because of this, it is essential that the effects and processes involved in this physical reworking be taken into account. Chapter 4 will provide a consideration of what the past island landscape may have looked like through a study of: changes in sea-level, terrestrial and marine geomorphology, hydrology, and oceanography. Through such a study, geological and geomorphological features (such as cliffs, bays and sandbanks) of the landscape and seascape of the islands will be reconstructed in order to examine their relationship with archaeological sites. Together with botanical and faunal data this will be used to recreate the past environment of the islands.

A chronological framework for the islands is vital if changes in the use and perception of space and landscape are to be isolated. No such framework currently exists; therefore, an important part of this research is to create a chronology for Scillonian prehistory. The creation of such a framework is addressed in Chapter 5 and will be based upon: the detailed re-examination of important excavations, the isolation and study of chronologically distinctive artefacts, and through a consideration of available radiocarbon dates.

The following three chapters (6, 7 and 8) will analyse aspects of the archaeological record. Chapter 6 will examine evidence for prehistoric settlement, questioning assumptions of what constitutes settlement, suggesting that the different ways in which the islands were inhabited during prehistory relate to different ways of living through and perceiving island landscapes. Settlement distribution, their landscape settings, and architectural configuration will be explored in order to ascertain whether an established ordering of space existed throughout prehistory and whether changes in such ordering can be identified. To provide a detailed study of settlement space a number of important settlements will be studied to obtain a broader data set for analysis and cross comparison. Finally this chapter will explore evidence for the abandonment of houses and the structured deposition of artefacts and objects.

Having considered settlements, Chapter 7 will examine evidence for prehistoric burial and ritual monuments on the islands. This chapter will provide an overview of the different types monuments found on the islands and question the basis upon which these are classified. I will consider how these monuments might have been used through an analysis of the deposition of human remains, artefacts and objects. The landscape context of monuments will be explored in relation the ancient coastline and through their relationship to significant topographical features. It will be shown that through the consideration of landscape settings, architecture, and spatial organisation, a detailed picture can be created of what places, views, and route ways were associated with these monuments during the prehistory._

Chapter 8 will examine evidence from the islands artefactual database for imports. Through the identification of imports I will assess the degree to which the islands might have been isolated from, or integrated with prehistoric communities beyond the archipelago.

The research themes explored in the preceding chapters, will be brought together in Chapter 9, where general conclusions will be drawn and avenues for further research suggested.

1.3 A note on figures cited in this thesis

The author, unless stated otherwise, has drawn all figures. Plans of monuments and houses have been drawn in the field to a scale of 1:50; artefacts to a scale of 1:1 or 1:2. Topographical data has been reproduced from Ordnance Survey data and manipulated using Macro Media Freehand 10 software. Contours, unless stated otherwise, are reproduced at 10m intervals. Marine contours and tidal elevations have been reproduced in accordance with British Admiralty guidelines (British Admiralty 1998) and recalculated to Ordnance Datum.

1.4 A note on radiocarbon dates cited in this thesis

All radiocarbon dates used within the text are given as calibrated BC dates (cal BC), expressed at a two sigma (95%) level of confidence as recommended by Mook (1986). The re-calibration of these dates has been achieved using the computer programme CALIB v4.1 devised by Struiver and Reimer (1986a, 1986b, 1993), using data published by Struiver *et al* (1998). Full details of these radiocarbon dates can be found in Appendix A.

2. A CRITICAL HISTORY OF PAST RESEARCH ON THE SCILLIES

This chapter will set the scene of this research by outlining the current state of archaeological knowledge for Scilly; providing a critical history of previous studies of Scillonian prehistory, outlining the main themes and paradigms that have dominated Scillonian archaeology to date, and summarising the current state of knowledge. It will be argued that although archaeological studies have considered only a limited number of themes (e.g. megaliths and the islands submergence), and that the archaeological database is incomplete, the main barrier to further research is the lack of a consideration of the islands' prehistory within an interpretative framework.

2.1 A history of archaeological exploration on Scilly

The archaeological database for Scilly is based on over two hundred years of archaeological interest in the islands (Ashbee 1974, 1986; Borlase 1753, 1756; Ratcliffe 1989). However, this database is problematic, comprising mainly of uncoordinated *ad hoc* research and single observations. During the 20th century three books have been published which deal specifically with the archaeology of Scilly (Ashbee 1974, Hencken 1932, Thomas 1985), together with numerous others that detail its social history (Bowley 1980; Hudston 2000; Mathews 1960; Mothersole 1919; Mumford 1967). Articles on Scillonian archaeology have been published in the journals of local and national societies; the results of early excavations and fieldwork were published in *The Antiquaries Journal, The Archaeological Journal, The Proceedings of the West Cornwall Field Club, Journal of the Royal Institute of Cornwall* and *The Scillonian Magazine.* Since the founding of the Cornwall Archaeological Society in 1962, most excavation reports have been published in its journal, *Cornish Archaeology,* with a couple of reports appearing in *Cornish Studies*, the journal of the Institute of Cornish Studies.

2.1.1 Antiquarian Research

Written records and accounts of Scilly do not exist before the seventeenth century (apart from when the islands impinged upon matters of national defence) and parish records were only committed to writing from the eighteenth century (Thomas, 1979c). Early accounts of the islands contain descriptions of its archaeology, with Borlase (1753, 1756) providing one of the earliest and most detailed accounts. Borlase visited Scilly during 1752 and undertook a detailed survey of its archaeological remains including the description and classification of many of its prehistoric monuments. Borlase also undertook an excavation of two entrance graves on Buzza Hill, St Mary's (Borlase 1753, 1756; Troutbeck 1796). The publication of his fieldwork on Scilly is of national importance representing one of the first attempts to explore the past through systematic fieldwork, which included the first ever account of the archaeological significance of sea level change (Fulford *et al.* 1997). Dr Johnson described this book as:

> "One of the most pleasing and elegant pieces of local enquiry that our country has produced" (Johnson 1756: 91).

Borlase's work is still relevant and has proved invaluable to archaeologists, allowing lost sites to be relocated and providing detailed descriptions of sites now destroyed (Ashbee 1974: 21-22; Crawford 1927, 5; Quinell 1978; Thomas 1978d: 106).

Borlase was an admirer and correspondent of Stukeley and attributed most of the prehistoric monuments in south-west Britain to the Druids (Pool 1966). However, unlike Stukeley, Borlase's work although speculative by modern standards, was always based upon sound fieldwork (Pool 1978d; Thomas 1978). This work was influential and much imitated by other Scillonian commentators, especially fellow theologians such as Troutbeck (1796) and Woodley (1822) who followed him in attributing burial monuments and many natural rock formations to the work of Druids. In particular, Borlase saw rock-cut basins (solution holes) and logan stones as Druidic altars and shines. Much of the rationale behind Borlase's and his followers' interpretation of what they observed was linked to their training within the priesthood: rock-cut basins became receptacles for holy water and the granite tors (frequently referred to as 'carns' in Cornwall) the high altars of a Druidic priesthood. Within his accounts Borlase details a chronology for the prehistoric monuments of the islands by placing them within a chronological framework supported through reference to biblical and classical texts.

It is unreasonable to blame Borlase for attributing to the Druids so many sites now shown to be of an earlier date or of natural origin. These theories, written before the birth of modern geology and the adoption of the Three-Age System were, on information available to him, attractive and tenable. It must be noted, as has been stressed by Piggott (1950, 120) in his study of Stukeley, that chronology at this time had to conform to Archbishop Ussher's accepted scheme whereby the date of creation was set at 4004 BC.

The work of Borlase stood as the benchmark for archaeological research on Scilly and, although others attempted to imitate his work, it was never surpassed until the 20th century. Troutbeck (1796) and Woodley (1822) carried out early excavations on the islands but the nature of these excavations is unclear, as no records exist. It is likely that many other antiquarian excavations have taken place on Scilly, evidenced by the robber pits dug into numerous entrance graves and cairns, but no written accounts of these exist.

2.1.2 Scillonian archaeology in the 20th century

The 20th century saw a dramatic rise in interest in Scillonian archaeology, instigated by a series of excavations carried out by Bonsor between 1899 and 1902. Bonsor excavated five sites on Scilly, these included a standing stone on Gugh and the entrance graves of Bant's Carn; Barrow A, Normandy Down; Obadiah's Barrow; and the Great Tomb, Porth Hellick

Down (Figs. 2.1 and 2.2). Hencken (1932, 1933) published details of three of Bonsor's excavations. My research in the British Museum, has brought to light the excavation of a previously undocumented entrance grave on Normandy Down (British Museum acquisition refs. 1926-11-12 [27-44]).

During 1926 Crawford visited the Isles of Scilly in order to search for the submerged boulder walls described by Borlase upon Samson Flats. As a result of this visit, he published in the first edition of *Antiquity* his now classic paper 'Lyonesse' (Crawford 1927), an account of the problems of marine transgression in the islands. While on Scilly Crawford visited many of the entrance graves and other burial monuments, descriptions of which were published in *Antiquity* (Crawford 1928). Crawford's articles sparked off a renewed interest in the islands (Daniel 1950; Piggott 1941) that culminated in the publication of Hencken's *Archaeology of Cornwall and the Isles of Scilly* (Hencken 1932), the first comprehensive account of Scillonian archaeology since the work of Borlase (1756).

Early archaeological research on Scilly is biased towards the study of burial monuments with little attention given to prehistoric settlement. An attempt to rectify this discrepancy was carried out by Gray during the 1920s and 1930s, who set about to demonstrate, through a series of excavations, the extent of prehistoric settlement on the islands. Gray did not publish his excavations and they remained unknown until rediscovered and published under the editorship of Ashbee (Gray 1972).

The years preceding and following World War II saw an enormous increase in archaeological activity (Fig 2.1 and 2.2). One reason may be the rise in popularity of Scilly as a holiday resort. This new industry was at its height during the 1940s and 1950s, encouraged by improved access (Chudleigh 1992; Ingram 1987). This popularity is reflected in the proliferation of holiday guides published during this period (Thomas 1978a; Villiers 1967). Between 1947 and 1953 O'Neil, then the Chief Inspector of Ancient Monuments for England and Wales, carried out a total of 21 excavations and extensive field surveys on the islands. This work was not undertaken in his professional capacity, but rather as a holiday pursuit. O'Neil's work is selective in its coverage being largely restricted to St

Martin's, his favourite holiday spot. O'Neil's excavations are, however, of great importance to the archaeology of Scilly changing the emphasis of research away from burial monuments to settlements. Through his excavations, O'Neil attempted to provide a cultural sequence for the islands and to place Scillonian archaeology within the wider framework of British prehistory. Unfortunately, O'Neil died before finishing this programme of research and accounts of his fieldwork remain largely unpublished, existing as archived notes, drawings and photographs within the National Monuments Record Office. Consequently, the largest data set available for excavated prehistoric settlements does not appear within accounts of the prehistory of the islands.

This vacational aspect of Scillonian archaeology is seen in the work of other fieldworkers such as Daniel (1947,1950) and Piggott (1941,1954). This piece-meal research is a distinctive feature of Scillonian archaeology which, although resulting in a proliferation of published articles, is characterised by a lack of detailed analysis and by the reiteration of common themes such as the classification and origins of megaliths (Ashbee 1963, Daniel 1947, 1950, Piggott 1941, 1954) and aspects of the islands' submergence (Crawford 1927, Daniel 1950, Fowler and Thomas 1979, O'Neil 1949c, 1961, Thomas 1985).

Another characteristic of Scillonian archaeology is the small number of individuals who have carried out extended research (Fig. 2.3). The majority of archaeologists who have worked on Scilly have done so through personal introduction or at the request of individuals living on the islands. This aspect of Scillonian archaeology provides an intriguing insight into personal and institutional relationships, so frequently overlooked within archaeological accounts of a region, making it possible to trace a genealogy of research.

Of these archaeologists only Hencken, Ashbee and Thomas have attempted to provide a detailed account of Scillonian prehistory (Ashbee 1974; Hencken 1932; Thomas 1985), but even in these examples, little interpretation of the data has been carried out. Hencken's (1932) *Archaeology of Cornwall and the Isles of Scilly* represented the first 'modern' survey (although the main focus of the text concentrates upon the Cornish mainland, with Scilly referred to principally in relation to its entrance graves). This book was one of the first published within the *County Archaeologies* series under the editorship of Kendrick. It was influential, as, until the publication of Ashbee's *Ancient Scilly* in 1974, it remained the only synthesis of Scillonian archaeology. *Ancient Scilly* clearly demonstrates Ashbee's encyclopaedic knowledge of Scillonian studies, but lacks any interpretative or theoretical treatment of the archaeological data, relying instead on the detailed description of monuments, settlements and material culture. In contrast, Thomas' *Exploration of a Drowned Landscape* (1985) is a collection of themed essays selective in scope and chronology.

2.1.3 Scillonian archaeology today

Until recently archaeological research on Scilly had traditionally been the work of individuals (Ashbee 1974). Since 1960 responsibility for the archaeological management of the islands has been placed variously with the Ministry of Works (Dudley 1960-61, 1967), Department of the Environment (Butcher 1970, 1971, 1978; Butcher and Neal 1971; Evans 1983; Neal 1983), English Heritage (Department of National Heritage 1992, 1999) and the Cornwall Archaeological Unit (Ratcliffe 1993, 1994; Ratcliffe and Parkes 1990; Ratcliffe and Sharpe 1991). Consequently, there has been a change in emphasis within archaeological research from one led by an academic agenda (Ashbee 1974, 1986) to one in which research is restricted to the management of an archaeological resource. Recent excavation has been in response to the perceived threats of coastal erosion (Butcher 1971, 1978; Dudley 1967; Neil 1983; Ratcliffe and Stralker 1996), development and agriculture (Dudley, 1960-61; Ratcliffe 1989; Ratcliffe and Sharpe 1990).

As part of an archaeological management plan for Scilly a number of intensive surveys have been carried out in order to assess and monitor the archaeological resource of the islands (Ratcliffe 1989). The Ordnance Survey, Institute of Cornish Studies (Russell 1980), Cornwall Archaeological Unit and English Heritage (English Heritage 1999) have carried out such surveys, which have dramatically increased the number of archaeological sites recorded on the islands, from *c.*700 in 1980 (Russell 1980) to approximately 1500 today; the majority of which are prehistoric (English Heritage 1992; Ratcliffe pers.com.). They have highlighted the number and range of sites on the islands, and demonstrated the national importance of this archaeological database. One important outcome of this has been the compilation of an independent Sites and Monuments Register and Excavation index for Scilly (English Heritage 1999; Ratcliffe 1987).

Centralised archaeological management has resulted in a more uniform approach to fieldwork and curation (Ratcliffe 1989), but has changed the emphasis of archaeological research from interpretation (Ashbee 1986) to its collection, classification and curation (Ratcliffe 1989). Although large quantities of new data have resulted from survey and excavation on Scilly, little synthesis, analysis or interpretation has taken place. Access to this data is also problematic due to the restricted distribution of publications (produced as reports for the county archive).

Another outcome of these surveys has been the dramatic growth of sites protected under government legislation. In 1983, ten sites on Scilly were protected (O'Neil 1983), today the number has increased to 246 with entire areas such as Porth Hellick Down, Castle Down, Shipman's Head Down and islands such as Samson, Gugh, and the Eastern Isles covered by such legislation (Department of National Heritage 1992, 1999). This move towards protection has the effect of limiting the possibility of archaeological investigation explaining why only two excavations have taken place since 1980 (Fig. 2.1). A wealth of archaeological data, such as the location and survey of new sites, has arisen from this recent work on Scilly. This work has not previously been used in interpretations of the archipelagos prehistory; existing only as original survey data (measured plans, sketches and photographs) held within the County and National archive. This data will be used in subsequent chapters of this thesis to address issues such as the distribution and landscape settings of prehistoric Scillonian monuments and settlements.

Museum collections

Excavated finds have been housed in the Isles of Scilly Museum since its construction in 1967. Prior to this museum finds were housed within the Royal Cornwall Museum, Truro, with smaller collections held by Penlee House, Penzance, The British Museum, The

Museum of Archaeology and Anthropology in Cambridge and the Museum of the Torquay Natural History Society. Many of these collections are problematic, as they have not been fully attributed making it difficult to trace their provenance. In particular, the extensive finds from O'Neil's excavations on Scilly are provenanced as being from un-located excavations on the islands. This has occurred as the result of the physical separation of the paper archive of O'Neil's excavations from its associated finds. Other collections, such as those held by the British Museum, contain artefacts that do not appear in the museum's acquisition register thus making it difficult to access the contents of their holdings and trace the locations of artefacts.

Whilst these museum collections have problems they can be overcome through: the construction of a single database of Scillonian material culture, and by the careful matching together of the paper archive and artefacts held in museums (Appendix K). This artefact database holds potential for addressing a key problem of Scillonian prehistory, namely, the lack of a chronological framework. The creation of chronological framework is essential to any consideration of the prehistory of Scilly; the construction of such a framework will be pursued in Chapter 5.

The Scillonian database

Before discussing the main themes that my research focuses upon, I shall briefly review the extent of the archaeological database for the islands. I do not intend at this point to provide a detailed consideration of the range of sites, their character and their chronology, as this will be pursued in detail in proceeding chapters. Rather, my intention is to provide a general indication of the character of this database on which subsequent analysis will be based.

Despite the shortcomings and inadequacies of past research, the islands represent one of the best-preserved prehistoric landscapes in Britain. Most excavations have taken place on St Martin's and St Mary's but sites on Arthur, Bryher, Gugh, Nornour, St Agnes, Samson, Tean, and Tresco, have also been investigated. The majority of archaeological remains, including houses, fields, burial and ceremonial monuments, are well preserved as upstanding features within the landscape. The reason for this exceptional preservation is that the majority are constructed of stone and lie on moorland or uninhabited islands untouched by modern farming. Not just individual sites, but whole landscapes survive and an unusual aspect of Scilly's archaeology is the presence of remains below high water, the result of the gradual submergence of a larger landmass. This preservation has made it possible to identify an entire range of monuments (many of which are not encountered on mainland sites), enabling us to explore how they relate to each other and the wider landscape.

The prehistoric database for Scilly is comprised of *c.*1000 individual Sites and Monuments Records (SMR) of which approximately 800 describe archaeological structures such as houses and burial monuments. Burial monuments predominate the archaeological record with cairns being the most common (Fig 2.4). The majority of monuments are still extant, although some have been destroyed since their discovery. The remaining 200 records represent artefacts collected from the islands, but not obviously associated with structural remains.

The earliest evidence of a human presence on the island is during the Mesolithic evidenced by stray finds and scatters of flint tools. Although concentrations of Mesolithic flint work have been identified at sites such as Old Quay, St Martin's, no evidence for a habitation site has as yet been identified. Equally, Neolithic settlement has not been demonstrated, although early stone and post built features identified below later round houses may eventually be dated to this period. Archaeologically visible stone built houses on Scilly, like elsewhere in south-west Britain, originate during the second millennium BC. Although single houses are not uncommon, settlements usually comprise of small groups up to eight houses. However, as discussed in Chapter 7, excavations suggest that these house groups may represent house sequences with no more than one or two houses occupied at any one time.

2.2 Themes of Scillonian archaeology

Past archaeological research on Scilly has explored only a small number of themes, including:

- The consideration of the islands' submergence and palaeo-environmental history.
- The misidentification of Scilly with the fabled Cassiterides and their role in the ancient tin trade.
- The study of megaliths.

2.2.1 Landscape Reconstruction

Ever since Borlase's discussion of the submergence of Scilly, much research has been directed towards the reconstruction of its prehistoric island landscape. Bell (1984), Ratcliffe (1989) and Ratcliffe and Stralker (1996) have been published summaries of this research. This major theme of Scillonian archaeology will be dealt with in Chapter 4; here I will provide a brief outline of the nature and range of such studies. Two broad categories of research may be identified: those that concentrate upon the submergence of the islands (the result of changes in sea-level) and studies which aim to reconstruct the past vegetation and faunal histories.

Submergence

Ashbee noted that the question of the submergence of the islands is unavoidable in any study of the prehistory of Scilly (Ashbee 1974). Crawford (1927), Ashbee (1974), Fowler and Thomas (1977) and Thomas (1985) have put forward models for the islands' inundation. However, only Thomas has provided a comprehensive model to account for the submergence.

The islands' exhibit evidence of sea level change: submerged peats have been recorded within the intertidal zone (Ratcliffe and Stralker 1996), and on various parts of the islands, stone houses, cists and field walls are exposed on the foreshore at low tide. The approximate dating of these monuments has allowed the construction of a preliminary height/sea level diagram (Fowler and Thomas 1979, Thomas 1985). This, together with place-name evidence, has been used by Thomas to suggest that most of the islands (with the exception of St Agnes, Gugh and Annet) formed part of a single landmass until inundation of the central low-lying area at a surprisingly late date, probably between the seventh and thirteenth centuries AD. This suggests a sea-level change for Scilly much greater than that advanced for south-west Britain as a whole.

Thomas' model has recently been called into question through the dating and analysis of intertidal peats (Ratcliffe and Stralker 1996), which suggest a much slower rate of sea-level change. This independent data has allowed for the correction of Thomas' model and suggests that sea-level change on Scilly was of roughly the same magnitude as that experienced within the rest of south-west Britain. The submergence of Scilly has received a great deal of attention and has produced a large resource of quality data. However, no attempt has been made to interpret this data in terms of the potential configuration of the prehistoric coastline or to look at its implication for the environmental and topographic setting of prehistoric monuments and settlement. An attempt at a resolution of this is required for the research of this thesis.

The environmental record

Scilly has an excellent palaeo-environmental record that is the result of extended environmental research for over half a century. Local pollen sequences have been established from twenty sites (Balaam 1981; Dimbleby, Greig and Scaife 1981; Greig and Keeley 1978; Ratcliffe and Stralker 1996) and a regional sequence has been provided by the analysis of ancient peat from two major wetland areas of St Mary's (Scaife 1980,1 982). A good number of radiocarbon determinations broadly date the vegetation changes represented in these pollen diagrams (Ratcliffe and Stralker 1996; Scaife 1982, 1984; Thomas 1985). Research into the prehistoric vegetation of Scilly was instigated by Dimbleby, whose analysis of a palaeosol sealed beneath sand dunes at Innisidgen, St Mary's, demonstrated that deciduous forest was once present on the islands (Dimbleby 1977). Dimbleby's findings were later confirmed by Scaife's pollen diagrams taken from Higher Moors and Lower Moors, St Mary's (Dimbleby, Greig and Scaife 1981; Scaife

1983). This environmental work has recently been substantially added to through the analysis of ancient pollen and plant macro remains taken from intertidal peat deposits and cliff-face sections (Ratcliffe and Stralker 1996).

Although the acidic soils of the islands are not conducive to the preservation of bones, sites inundated by blown sand have produced impressive archaeo-zoological collections (Thomas 1985; Ratcliffe and Stralker 1996). The analysis of animal remains from archaeological sites has taken place throughout Scilly, with specific studies upon St Martin's (Turk 1978b; Locker 1983), St Agnes (Smith 1995), St Mary's (Locker 1999), and the Eastern Isles (Turk 1978a, 1991). Turk has made a particular study of the Scillonian mammalian evidence, finding that cattle, sheep, horse and pig bones show very markedly the phenomenon of insular nanism. Evidence for the occurrence of wild deer and pig bones at Nornour have led to debate over whether a wild or managed population may once have existed (Thomas 1985; Turk 1978a) or whether the bones represent food brought from the mainland (Pernetta and Hanford 1970). Large quantities of fish, bird and sea mammal bones of a variety of species occur within excavations (Butcher 1978; Neal 1986). More recently, work on the sampling and dating of cliff-faced sites has added considerably to the information available (Ratcliffe and Stralker 1996). Evidence from middens demonstrates the importance of the sea with both shallow and deep-sea fish and sea mammals (including seals, dolphins and whalebones) being present (Locker 1992; Turk 1971; Thomas 1985 Ratcliffe and Stralker 1996).

The overall picture that emerges is one of a well-integrated land / sea economy with a wide range of resources available. These, together with the very favourable Scillonian climate probably made possible a higher density and continuity of settlement than might otherwise have been the case. Fowler and Thomas (1979) have argued that the Isles of Scilly represent one of the most important areas of Britain for future interdisciplinary work in archaeology and environmental studies. Although much data exists, little wider interpretation of this data has been carried out.

2.2.2 Ancient people and places

Early archaeological accounts of Scilly frequently attempt to draw links with classical accounts of ancient peoples such as the Druids, Greeks and Phoenicians. The objectives of much of this work has been to demonstrate that the islands are the fabled Cassiterides and that Scilly played a central role within the trade of tin to the classical world. This theme is not restricted to the antiquarian past but is perpetuated in more recent guidebooks and popular accounts of the islands (Bowley 1980: 23; Fowles 1978; Hudston 2000; Mumford 1967: 45-50).

Evidence for the prehistoric exploitation of tin in south-west Britain comes from tin streaming (Craddock and Craddock 1997; Penhallurick 1997). However, on Scilly, there are neither tin bearing gravels or, with negligible exception, streams that could provide a head of water. The earliest reference to a methodical search for tin comes from a Parliamentary survey carried out between 1690 and 1695 in order to ascertain the islands' economic potential (Thomas 1985: 150). The surveyor reported that a detailed investigation found no evidence for the extraction of tin and only one inconsiderable vein. When Borlase visited the islands in 1752 it is clear that he believed them to be the Cassiterides; he was acquainted with the practical geology of his native Cornwall and would have been familiar with its numerous tin workings, however, during his visit he was unable to locate any evidence for tin extraction (Borlase 1756: 45,71).

Other abortive attempts to find tin include those of the islands' proprietor the Duke of Leeds, who in 1791 dug a pit east of the Garrison gate on St Mary's (Thomas 1985: 150). It was L'Estrange's misidentification of this pit as an ancient tin working during the nineteenth century that led him to argue that the islands were once an ancient source of tin (1865). In turn this misidentification led Bonsor in 1899 to spend three years on the islands seeking proof for the hypothesis that they were the Cassiterides. As far as the early tin trade was concerned his work was entirely negative but during his visit he carried out a number of important excavations (Ashbee 1980; Hencken 1932, 1933).

The romanticism of linking Scilly with the classical world is perhaps most evident in the work of Fowles (1978), who highlights the importance of the islands in trade with the Phoenicians. He claims (without evidence) that tin was once more abundant and exposed on Scilly than on the mainland and because of this became exhausted by the Roman period. He goes further, linking the islands with both classical and Celtic mythology, with the Hesperideans, the Islands of the Blest, Lyonesse and the Land of the Shades. Fowles' claims are based on a romanticised past, but one that continues to be popular in accounts of the islands (Hudston 2000; Mumford 1969, 41).

2.2.3 Megaliths on Scilly

The study of megaliths on Scilly has concentrated almost exclusively upon one type of monument: the entrance grave (Ashbee 1963, 1982, 1986; Borlase 1752; Daniel 1947, 1950; Hencken 1932; Piggott 1954). This narrow focus has resulted in other monuments (such as cairns, cists and menhirs) and settlement, being excluded from accounts of the islands' prehistory.

Lack of publication has resulted in the interpretation of entrance graves being based upon a small number of excavated sites. Where accounts do exist they are vague and suggest that excavation was limited to the chamber area (this can be seen in the photographs of Gibson [Arlott 1972]). Only six excavations have been published in any detail and these accounts have formed the foundation for all subsequent discussion of the Scillonian entrance grave (Ashbee 1974; Daniel 1950; Hencken 1932; Whittle 1977; Thomas 1985).
The study of the entrance grave has raised a number of key questions (all of which remain unresolved), including the following:

- Do Scillonian entrance graves form a cohesive group of monuments?
- Why is there a disproportionate number of entrance graves found on Scilly as compared with the mainland?
- Where do the origins of the Scillonian entrance grave lay and what is their relationship to similar monuments found in West Penwith, south-west Ireland, south-west Scotland, Brittany and the Channel Isles?

Monument Classification

Bonsor was the first to devise a system of classification for the Scillonian chambered cairns, using the term 'covered galleries'. O'Neil subsequently coined the term 'entrance grave' in order to differentiate between chambered cairns containing accessible chambers, from those containing sealed cists. Hencken differentiated between entrance graves that comprised simple polygonal chambers, and passage graves that showed marked distinctions between chamber and passage. Subsequent archaeologists have been in broad agreement with O'Neil and Hencken's classification drawing attention to the standardisation of entrance grave plans (Ashbee 1974; Daniel 1950; Fox 1964; Hencken 1932; Piggott 1954, Thomas 1985). Although standardisation exists, typological distinctions between cairns with freely accessible chambers and cairns containing closed cists are far from clear in the field. Furthermore, the distinctions drawn between passage graves and entrance graves are frequently the result of preservation rather than design (Ashbee pers.com).

The distinction between entrance graves and cists is based upon the comparison of a small number of published plans (many of which are inaccurate), representing a highly selective view of these monuments. Within these accounts, little consideration is given to the function of these monuments, or to their contents or topographical locations. This is particularly relevant in light of the much greater number of such monuments now identified on the islands.

Whilst problems exist in the classification of Scillonian monuments, the unravelling of such distinctions will only be resolved through further excavation. For the purpose of this thesis the distinction drawn by O'Neil between an entrance grave, (comprising of a chambered cairn containing an accessible chamber), and cairn (containing a sealed chamber) will be adopted. In subsequent chapters, the focus of research will concentrate upon the relationship between monuments and the island landscape as articulated through their relationship to both the natural and constructed environment.

The identification of individual monuments is confusing as four different numbering systems for the Scillonian entrance graves exist (Ashbee 1963, 1974, Daniel 1950, Hencken

1932, 1933; Russell 1980), which has led to frequent misidentification of monuments (Thomas 1985: 120, fig. 52). The Cornwall Archaeology Unit, English Heritage and Ordnance Survey have compounded this, as rather than alleviating the problem each has adopted a different system of monument identification (Department of National Heritage 1992, 1999; Ordnance Survey card index; Ratcliffe 1989,171-203). For the purpose of this research project the numbering system used by the Cornwall SMR has been adopted.

Number and origin of entrance graves on Scilly

The disproportionate number of these monuments in relation to the size of the islands is a recurrent theme within Scillonian archaeology, as stated by Hencken:

> '.... it is hard to understand how such an island, which could scarcely have supported much of a population came to have on it such a profusion of burials' (Hencken 1932).

Hencken argued that the prehistoric communities of Scilly might have originated from Brittany, drawing comparisons between the passage graves of that area with the entrance graves of Scilly viewing Scilly as a provincial extension of a Breton megalithic culture (Hencken 1932: 28). Like Hencken before him, Daniel emphasised the large number of entrance graves on the islands, stating that a quarter of all the chambered tombs in southern Britain were found on Scilly (Daniel 1950). Daniel noted similar monuments in West Penwith but suggested that of these only four were entrance graves. Daniel, like Hencken, also pointed towards a Breton origin for these monuments drawing attention to similar burial monuments in Finistere, Morbihan and the Channel Isles (Daniel 1958: 43).

The Scillonian entrance grave was included in Piggott's *Neolithic Cultures of the British Isles* (Piggott 1954) where he envisaged them as the major component of what he termed the Scilly-Tranmore Group of collective tombs, through comparison to a group of Irish tombs studied by Powell (1941) in the Tranmore region of County Wexford. Piggott saw this group as representing prehistoric colonisation on the two sides of the Irish Sea.

Davies (1945, 1946) stressed the importance of the sea in accounting for the distribution of megaliths along the Atlantic seaboard of Britain and Ireland. Bowen, a geographer, also discussed the nature of sea borne movement in prehistory in his account of *Britain and the Western Seaways* (1972). Bowen considered the geographical distribution of megaliths in the light of later sea traffic, the voyaging of 'Celtic' saints and pilgrims using skin boats. He concluded that as early as the Mesolithic and Early Neolithic an established pattern of movement and trading from peninsular to peninsular and coast-to-coast had been established and that the origin of this movement was the pursuit of migratory fish.

Clark, in response to Bowen, suggested that the economic basis of prehistoric Scilly was based upon fishing rather than farming (1977). Using archaeological and anthropological data from Northern Europe, Clarke argued that Scilly's close proximity to the rich fishing grounds of the Melville Knoll (south-west of the islands) made Scilly an obvious location for settlement during prehistory. Clark argued that the apparent cultural continuity seen in the occurrence of passage graves along the Atlantic fringes of north-west Europe could be best explained as being the result of sea-borne fisher-peoples. The distribution of megaliths throughout this region was thus accounted for though the movements of people following the migrational patterns of fish (in particular hake and mackerel) along the Atlantic seaboard.

These views were developed when modified diffusion was deemed the social mechanism behind the appearance of similar monuments in various sea-separated places (Renfrew 1973: 20-47). Reaction against the idea of diffusion within British prehistory and a common origin for megaliths has led to the exclusion of all movement from the lives of prehistoric people. None-the-less, coastal, sea borne movement could have been considerable, for the seas have the facility to unite as well as divide. In light of recent work on the Atlantic megalithic phenomena (Bradley 1993; Sherratt 1990) Clark's argument appears simplistic. However, Clarke's assertion that the primary economic basis for Scilly was the sea might be significant to the interpretation of the archaeological record of the islands. In this light, a reconsideration of palaeo-environmental data, such as fossil pollens and animal bones, will be used, in Chapter Four, to assess the degree to which prehistoric Scillonians relied upon land and sea resources. This information will be used to provide a background to the types of activities carried out within the island landscape and how such a landscape might have been experienced and perceived by prehistoric islanders.

Over the past 30 years, and in light of radiocarbon dating, diffusionist models have been disputed, and seen to be founded largely upon dubious typological parallels (Renfrew 1973; Whittle 1977). Typological similarities between the Scillonian entrance grave and megaliths in Brittany do not withstand detailed study. Resemblance with the Breton tombs of L'Helgouach's Mane-Kerioned B megaliths (Giot *et.al.* 1998; Le Cam 1999) for example, are based solely upon the presence of simple polygonal chambers, with no account taken of the different scale and shape of the cairn in which these chambers are located. Unfortunately, as no recent theoretical consideration of the Scillonian entrance grave has been carried out the model in which they are embedded is still that set down by Daniel and Piggott.

My research will redress this lack of recent consideration, firstly, through a reconsideration of the dating of Scillonian prehistoric monuments, and thus, how they fit within the wider chronological and cultural framework of British and European prehistory (Chapter 5). Secondly, the characterisation of monuments, such as their size, the shape of their chambers, the orientation of their entrances and their landscape settings, will be explored in detail in Chapter 7. Whilst my research does not intend to draw direct comparisons between the prehistoric monuments of Scilly and those found elsewhere within Britain, Ireland and Europe, by placing them within a chronological framework and by identifying common characteristics, this research will allow future work to make such comparisons possible.

Megaliths and social significance

In 1973, Ashbee published an article, *Culture and Change in the Isles of Scilly,* which created a cultural sequence for the islands, setting out a chronological model for the development of monuments and settlement (Ashbee 1973). Ashbee (1986) followed this article by a consideration of the spatial distribution of entrance graves. Drawing from Renfrew's analysis of the chambered cairns of Arran and Rousay (Renfrew 1976, 1979), Ashbee proposed a scheme of founder and secondary monuments for Scilly that he placed at the centres of hypothetical territorial boundaries (1986). This model was based upon the assumption that land was the premium resource and means of differentiating between island communities and that entrance graves acted as markers defining territorial land ownership. However, Renfrew's model, when applied to Scilly, is untenable. Firstly, the entrance graves on Scilly, unlike those studied by Renfrew, are not evenly distributed across the landscape but occur in clusters of up to seventeen along the Atlantic coastline; it is hard to see how such a distribution could have acted as a means of territorial land division. Secondly, the assumption that land was the primary means of social differentiation is based upon the idea that megaliths are built and used by farming communities; the analysis of middens on the islands, which comprise of enormous quantities of mollusc, fish and sea mammal bone (as discussed in Chapter 4) suggest this not to be the case. My research will therefore address whether the distribution of Scillonian burial and ceremonial monuments forms distinctive patterns, and how such patterns might relate to the spatial organisation of the Scillonian island landscape.

2.3 The place of Scilly within the wider interpretations of prehistory

In 1986, Ashbee published an article entitled *Ancient Scilly: Retrospect, Aspect and Prospect,* which marked the end of his 35-year involvement in Scillonian archaeology. In this article he provided an overview of all research undertaken on the islands to date and made a number of suggestions and recommendations for the future direction of Scillonian studies. It seems ironic therefore that seventeen years later, and in spite of the islands now extensive archaeological database, there has been no academic involvement or further interpretation or analysis of the islands' prehistory.

Lack of publication plagues Scillonian archaeology; because of this, interpretive archaeologists have been unwilling to carry out research on the islands choosing instead to focus on better-studied areas of Britain. Consequently, the archaeology of Scilly is not featured within accounts of British or European prehistory. Archaeologists working in south-west Britain have viewed some of the inherent themes of Scillonian archaeology, such as the islands' submergence, as problematic for archaeological fieldwork and interpretation. Scilly has been overlooked in favour of areas perceived as less problematic, such as Dartmoor, Bodmin Moor and West Penwith (Bender *et al.*1997; Flemming 1988; Herring 1994).

2.3.1 Scillonian archaeology and British prehistory

The Isles of Scilly feature within many older accounts of British prehistory (Childe 1940, Daniel 1950; Kendrick and Hawkes 1932; Piggott 1948, 1954), but these accounts underemphasize regional diversity and promote a diffusionist approach. Within recent accounts of British prehistory Scilly is rarely discussed and when mentioned is not placed within the framework and theoretical debate of British prehistory (Bewley 1994; Hayes 1993; Parker Pearson 1993). Accounts of Scillonian prehistory, when they occur, are restricted to the reiteration of the set themes of older research thereby preserving the islands' past within the diffusionist model in which it was set during the 1950s (Darvill 1995; Dyer 1973; Forde-Johnston 1976; Megaw and Simpson 1979; Reid 1993; Parker Pearson 1993; Todd 1987).

Barclay (2001), in a recent discussion of the Neolithic of Scotland, argues that core areas of study can be identified within British prehistory, namely Wessex and Orkney, and that these areas dominate how we perceive Britain during prehistory. The pattern of archaeological evidence from these areas is viewed as the norm against which other areas, such as the south-west, can be viewed as abnormal. In this respect, the archaeological evidence from Scilly only appears within accounts of the prehistory of Britain in order to fill gaps in the evidence of the core study area of Wessex. During the 1980s and 1990s debate about regional variation and the relative importance of different regions, has become mainstream. Authors have deliberately examined regions in their own right, rather than as comparisons for one or two primary areas (Barrett *et.al* 1991; Thomas 1991; Edmonds 1999). In light of this movement towards regionality one would expect Scilly (and south-west Britain) to have played a much more visible role within British prehistory. However, as Harding has noted:

> "..an approach that recognises regionality but consigns it to a minor role in narratives still has a dominant place in the literature of British Prehistory" (Harding 1997)

This is the case for Scilly where the reader of recent accounts of British prehistory would be hard pressed to find any discussion of direct relevance to the islands.

2.3.2 Scillonian archaeology and the prehistory of Cornwall

Within accounts of Cornish prehistory Scilly is frequently not included (Fox 1964; Harris 1986; Mercer 1986; Weatherill 1985; Quinnell 1986; Shorter *et.al.* 1969; Todd 1987). When Scilly appears within this literature there is a failure to fully integrate the Scillonian material with the archaeology of mainland Cornwall and south-west Britain. As such, Scilly appears within this extensive literature as a subsection or appendix to the archaeology of the mainland. Within such accounts the Neolithic and Earlier Bronze Age of the islands is the primary focus, with little consideration given to the many Later Bronze Age and Iron Age sites (Harris 1986; Mercer 1986a; Quinnell 1986; Weatherill 1985). This exclusion is surprising, as these later periods are better chronologically understood through the presence of distinctive pottery and metalwork styles some of which have parallels with mainland Britain and continental Europe.

2.3.3 Scillonian archaeology and the prehistory of Atlantic Europe

Accounts of the prehistory of Atlantic Europe have played a major role within the archaeology of south-west Britain. Models of cultural change and interaction have been put forward to address issues such as: the distribution of megaliths (Daniel and Kjaerum 1971; Giot 1979; Giot *et.al* 1998; Whittle 1977) and the trade in metalwork and tin (Cunliffe 2000; Needham 1979; Shell 1979). Research in this area culminated in the formation of the

Atlantic colloquium (Daniel and Kjaerum 1971), which comprises researchers examining evidence for prehistoric cultural contact and continuity throughout Atlantic Europe. This research is founded on a long tradition of archaeological research dating back to the 1930s.

In Britain, such research has focused on the Irish Sea zone and its connections with Western Europe (Lynch and Burgess 1972). These accounts draw connections between Ireland, Scotland, Wales and continental Europe. Within these accounts, no reference is made to Scilly or to the prominent position of the south-west peninsular at the entrance to both the Celtic Sea and English Channel. Within such accounts emphasis is placed upon one hypothetical area (such as the Irish Sea province), and although seafaring is highlighted as the primary means of contact across the Irish Sea and with Atlantic Europe, no discussion is given to the routes taken and the social and practical implications of such routes. This has resulted in all areas outside of the 'area of study' being omitted from research. This omission is most notable in south-west Britain where navigation around the Lands End peninsula would have presented a major challenge to prehistoric seafarers.

Although Scilly would seem ideally located to play an important role in discussions of the prehistory of the Western Atlantic seaways, such as within Cunliffe's (2001) recent emphasis upon the sea in the formation of a distinctive prehistoric Atlantic identity, Scilly does not get a mention. A literature review of key texts on European prehistory found no reference to the Isles of Scilly.

The principle reason for the exclusion of Scilly from such accounts is the lack of recent research within the archipelago. It is beyond the scope of my research to fully situate Scillonian prehistory with that of European prehistory. Chapter 8 will consider evidence for contact between Scilly and the wider prehistoric world through the identification of imports.

2.4 Conclusion

It has been shown that although the Isles of Scilly have received a great deal of consideration over the years, this work has been largely piece-meal and uncoordinated. Equally, such studies have sought to address only a small number of research themes. A further characteristic highlighted is that recent research has been carried out as a response to the potential destruction of sites and not as part of a long term research strategy.

If Scillonian archaeology is to move forward it is of vital importance that the island's archaeology be reconsidered in light of contemporary archaeological approaches to the study of landscape. Equally important is that Scilly is studied first and foremost as an island. It is the intention of this research to refresh Scillonian archaeology through adopting an interpretive perspective that draws from both contemporary approaches to the study of landscapes (Bender *et al.*1997) and those that deal specifically with islands (Broodbank 2000). The key issue stressed here is that we should not assume that the island landscape of Scilly stopped at the shoreline. Rather, we should suppose that both landscape and seascape were invested with a multitude of meanings and significances. These approaches, their applicability to Scilly, and their implications for fieldwork will be discussed in Chapter 3.

Scillonian archaeology, as it stands, lacks a detailed chronological framework (Fulford *et al* 1997, 173). The creation of such a framework is of fundamental importance if we are to realise the full potential of the large and unique archaeological database that Scilly offers. The creation of a modern chronological framework will be pursued in Chapter 5. Available radiocarbon dates will be critically examined in order to create a chronological sequence, allowing changes in the archaeological record of the islands to be examined within a temporal framework. This chronological sequence will be further refined through the study of artefact typologies and their known stratigraphic relationship to datable contexts.

Finally, although much research has explored Scilly's submergence and palaeo-environment (Ratcliffe and Stralker 1996), this data has not been effectively used to reconstruct the nature and configuration of the prehistoric island landscape. This reconstruction is vital if we are to effectively explore the relationship between archaeological sites within their contemporary settings. A study of the effect of sea-level change and a reconsideration of the island paleo-environment record will be explored in Chapter 4.

3. APPROACHES TO THE STUDY OF THE ISLAND LANDSCAPES

In this chapter, we will explore the ways in which landscapes and islands have been studied by archaeologists and how these approaches may be applicable to the study of the Isles of Scilly. The chapter is organised in three sections. It begins by examining recent approaches to the study of landscape within British prehistory. One important line of enquiry here is drawn from recent practice and phenomenological approaches to the perception and experience of the prehistoric landscape and the significance placed upon the settings and configuration of monuments and settlements. Following on from our consideration of landscape, the archaeology of islands will be explored. A consideration of *Island Archaeology*, as developed within the Mediterranean and Pacific, will be used to explore themes relevant to the study of an archipelago of islands such as Scilly (Broodbank 2000; Gosden and Pavlides 1994). Discussion of islands will then focus specifically upon the archaeology of islands within Britain and Atlantic Europe. In the final section, we will highlight relevant research themes and outline a methodology for the analysis of the island landscape of Scilly. The aim is not to exhaustively cover all approaches to the study of landscape and islands but to demonstrate their potential for expanding and revitalizing the archaeology of Scilly.

3.1 The study of landscape

The study of prehistoric landscape enjoys a central place within contemporary archaeology, a point demonstrated in the proliferation of field projects, conference sessions, publications and post-graduate courses. It is claimed that this fixation is in danger of swamping the research agenda of British prehistory and that such a proliferation of research has been to the detriment of other branches of the discipline (Burgess 2001; Ucko and Layton 1999). However, one benefit of such a wealth of research has been that landscape studies within British prehistory are at the forefront of academic debate, allowing archaeology to contribute to discussions of landscape within the wider social sciences.

Cosgrove (1984) has shown how the concept of landscape adopted within the social sciences has its origins within 16th-Century Italian landscape painting and in the emergence of the science of cartography. Landscape painting places emphasis upon perspective and vantage point, by fixing the experience of landscape to the gaze (Bender 1993). By contrast, cartography within the land and the sea renders landscape into two dimensions, to a particular scale and with a grid laid over it (Bender 1999; Gosden 1999). These renderings of landscape are not those of sensuous or lived experience, but a looked at and disembodied sense of being, something external to people (Rodway 1994). The concepts of landscape as represented in the picture and map has had a major influence on everyday lived experience and on academic views of the world. Such an emphasis upon view and viewpoint is reflected in the dominance of this one sense within contemporary society, what Jay describes as 'a distinctive ocular view of the world that permeates western scientific discourse' (Jay1993).

Traditional approaches to landscape archaeology within Britain have been dedicated to the surveying and mapping of significant cultural features such as, field boundaries and settlement (Aston 1985; Bowen and Fowler 1978; Crawford 1953). These approaches emerged as an alternative to excavation, and have proved highly successful in the discovery and documenting of archaeological sites (Aston and Rowley 1974). Such approaches concentrate upon providing a form of landscape history in which the landscape is seen as a palimpsest of past human activity (Hoskins 1955). Many of these perspectives concentrate upon the environmental or economic conditions under which prehistoric people lived. However, these approaches have been criticised as relying too heavily upon empirical description at the expense of the role of meaning within the landscape (Richards 1996; Thomas 1993b).

In contrast, a Cartesian concept of space, in the form of social and statistical models, entered the New Geography and Archaeology in the 1960s in the form of spatial analysis (Clarke 1977; Hodder and Orton 1976). Recent approaches have moved away from a spatial analysis that reduces human action to a series of numerical variables (Hodder 1976a, 1976b). Central to this critique has been a reaction against environmental determinism and the logic of the map (Thomas 1993b). In such accounts, Cartesian rationalism has been replaced by a concern with the role of meaning and tradition in the shaping of the social landscape. This new work has drawn extensively from alternative perspectives of landscape developed outside the discipline, most notably from anthropology and human geography where landscapes are seen as cultural interpretations of space produced through human engagement (Gregory and Urry 1985; Hirsch and O'Hanlon 1995; Soja 1989).

Landscape as a concept crosses many disciplinary boundaries; it is a rich and indefinable field, a point that led Gosden and Head to define it as 'a usefully ambiguous concept' (1994). One common theme that can be identified as running through this seemingly disparate research has been the shift in perspective from an abstract and objective space to that of a lived experience of place (Ingold 2001a, 2001b). In part, such a shift has come about through a growing awareness of indigenous peoples' perceptions of landscape and the realization that such landscapes are deeply ingrained with meanings for the people who inhabited them (Basso 1984; Morphy 1995).

3.1.1 Recent approaches to prehistoric landscape

Recent approaches to landscape have been influenced by the work of Giddens and Bourdieu who stress that both people and landscape are mutually creative; in this way although people make landscape, in turn, landscapes make people. Bourdieu's concept of the *habitus* (Bourdieu 1977) and Giddens' Structuration Theory (1984) explain how people acquire practical consciousness of the world as they grow up, through observing how people react with each other and the material world around them. In this way the day-to-day interaction between people, objects and the landscape allow the cultural beliefs and practices that makes up the *habitus* to be reproduced through time and space.

A related theory is Ingold's *dwelling* perspective through which he argues that people do not construct their world but rather are immersed in an environment as an inescapable condition of existence (Ingold 2001a). From this perspective, the world continually comes into being around the inhabitant, with the constituents of this world taking on significance through their incorporation into a regular pattern of life activity (Ingold 2001a: 153). Ingold's dwelling perspective is given a spatial dimension through his image of the taskscape, which is seen as an array of related activities spread across the physical landscape (Ingold 1993). By focussing upon situated practices, Ingold emphasises the inherent temporality of landscape. Space is produced and experienced through people's daily activities and through such activities social structures emerge. Therefore, landscape is both the outcome and medium of social action (Giddens 1984). Our bodies are the primary medium through which we experience landscape and through the process of socialisation, we develop a 'spatial awareness' that in turn creates standards for our relationships with other people.

Such practice based approaches blend into those influenced by phenomenology that look at the lived experience of the landscape (Gosden 1994; Ingold 1993; Tilley 1994). Landscapes are experienced through our bodies through 'being in the world'. Ingold emphasises the centrality of the body in landscape perception stating that,

> 'In a landscape, a journey from A to B is experienced as the bodily movement from one place to another, and the gradual changing vistas experienced through movement...with the contours of the landscape experienced as they enter our muscular consciousness' (Ingold 1993: 155).

This is fundamentally different from the notion of landscape as conceptualised in the plan or map, where the onlooker is omnipresent and disembodied from the landscape. It is this human bodily engagement with landscape that forms the basis of phenomenological interpretation.

By implication, if we accept the centrality of the body in our perception of landscape, archaeological analysis cannot solely be founded upon maps. However, it is difficult to escape from the logic of the map as archaeological fieldwork involves the routine production of maps, plans and sections. These representations are used as the principle means through which archaeologists classify, compare and analyse the archaeological record. However, we must be aware that the plan, like the map and the aerial photograph, represent an abstracted and omnipresent representation of the landscape, one that would have been alien and beyond the experience of prehistoric Scillonians. Landscape as represented in maps and plans are alien to daily experience and are devoid of detail. In contrast, the world of experience is sensuous and suspended in movement; through movement, the world continually comes into being and through this movement we contribute to its formation. Knowledge of the landscape is learned through people's encounter with the world, by copying, watching, listening and through attentive involvement (Bender 1999: 35).

Although the archaeological plan is essential to the analysis of the archaeological record, the aim of the analyst should be to move beyond the plan by supplementing such representations through the adoption of phenomenological approaches. By rejecting the dominance of the map we are reoriented to an experience of the world mediated through our physical bodies, one in which our relationship to the landscape is localised and shifting. My research on Scilly will emphasis movement upon both land and sea in order to ascertain potential relationships between the prehistoric 'constructed' and 'natural, landscape.

3.1.2 Ritual and everyday landscapes

The way in which British prehistoric landscape has been studied within archaeology has given rise to a conceptual division. There exists on one side a ritual world full of symbolic meaning, and on the other, a pragmatic world of 'getting on with things' and 'making a living' (Bender *et al.* 1997; Bender and Edmonds nd.). Whilst many archaeologists have spent a lot of time thinking about prehistoric monuments (Barrett 1994; Bender 1992; Thomas 1991; Tilley 1994), fewer have considered domestic spaces (but include Parker Pearson and Richards 1994a, 1994b; Richards 1990).

This imbalance is also demonstrated by the different approaches adopted in the study of British prehistory. The Neolithic and Earlier Bronze Age of Britain, is seen as ritually focussed, with the archaeological record characterised by the presence of burial, and ceremonial monuments and by the relative absence of evidence for settlement. In contrast, the Later Bronze Age and Iron Age within Britain, is characterised by the presence of recognisable evidence for settlement and land enclosure. These later periods give the impression of being familiar to us as opposed to the earlier periods that seem alien. Because of such familiarity, it has traditionally been felt unnecessary to develop theoretical approaches for the Later Bronze Age and Iron Age as functional and 'commonsense' interpretations were seen to suffice. Despite archaeologists looking anew at these later periods of British prehistory (Hamilton and Manley 2001; Hill 1992; Parker Pearson 1996a, 1996b) this contrast remains. Bender *et al.* (1997) note that although we acknowledge, houses and settlements are imbued with ritual and symbolism, we still, tend to regard them as profane, more normal, more practical and more functional places than stone circles and cairns.

On Scilly, this chronological divide, between a ritualised Neolithic/Early Bronze Age world and an 'everyday' Later Bronze Age/Iron Age world, is prevalent within the archaeological literature. My research will break down this chronological and conceptual divide, arguing that these apparent differences in the archaeological record relate to the alternative ways people lived through and perceived the island landscape.

The value of concepts such as ritual and everyday, particularly in the interpretation of prehistoric landscape, has recently been called to question. Such concepts remain problematic unless we can clearly define what we mean by such terms and how they can be identified. Unless such differences can be clearly distinguished archaeologically, their use as a tool for analysis is seriously weakened. Brück (1999a) has shown how the concept of ritual used within archaeology and anthropology is a product of post enlightenment rationalism that is not necessarily applicable to other cultural and historical contexts. Indeed, ethnographic studies suggest that many societies do not distinguish between ritual and secular action and, that what many anthropologists have identified as ritual is generally considered practical and effective action by its practitioners (Bell 1992, 1997; McCarthy Brown 1995). This is because different conceptions of instrumentality and causation inform such activities. Brück argues that the use of the concept of ritual and everyday has resulted in a fundamental misapprehension of the nature of prehistoric rationality. Within archaeology the concept of ritual is frequently used as an 'explain all' term to describe phenomena that does not meet modern western criteria for practical action, and is therefore described as non-functional and irrational. The definition of ritual as 'non-functional action' has become the single most important characteristic for identifying ritual archaeologically. One important consequence of this has been that what has been categorised as everyday action, such as subsistence practices, is seen as being governed by a universally applicable functionalist logic. Brück (1999a) suggests that we need to jettison the notion of ritual and everyday from our accounts of the past. For her, ritual and everyday are the same side of the coin – any practical action is simultaneously symbolic because it reproduces sets of values and social relations. In adopting the notion of ritual as practical and effective action, we are acknowledging that there is an alternative form of rationality in the past, which is quite different from a functional or economic logic. Hence, the question 'can we identify prehistoric ritual?' is unhelpful; instead, we should ask 'What can past actions tell us about the nature of prehistoric rationality' (Brück 1999a; Chapman, J. 2000: 61-88).

The implications of this for my research is that the binary oppositions that exist between the ritual and everyday, and thus between monuments and houses, cannot be used as the basis for the analysis of the island landscape. We must accept Brück's assertion that rather that ritual and everyday being in opposition to one another they are in fact of the same; all is ritual and all is everyday.

3.1.3 Key themes of British landscape studies

A central theme within studies of landscape archaeology has been to focus on the locational and architectural features of monuments and how they operate in emphasizing and signifying certain aspects of the lived landscape (Richards 1996; Tilley 1994). Key to much of this work has been the consideration of how people may have experienced monuments and the ways in which formal patterns of movement may have linked together sites across the landscape (Barrett 1994; Bender 1992; Thomas 1991; Tilley 1994).

Research has focussed upon the distribution, setting, configuration and orientation of houses and monuments (Bender 1993; Bender *et al* 1997; Parker Pearson 1996; Parker

Pearson and Richards 1994b; Tilley 1994;). For example, the orientation of the doorways of houses and the entrances of burial monuments has been shown to have been of significance during prehistory (Brück 1999b, Oswald 1997, Richards and Parker Pearson 1994b), with the consistent eastern orientation of British Later Bronze Age doorways being interpreted by Parker Pearson (1999b) as a cosmological ordering of the world. Similarly, the importance of chamber orientation within prehistoric burial monuments has been demonstrated by Richards on Orkney (1996) and by Cooney (2000) in Ireland where a link has been demonstrated with the rising and setting of celestial bodies at significant times of the year.

Through such research, it has been shown that the built environment involves a deliberate attempt to create and bind space, thus having profound structuring effects on how we perceive the landscape. In practice, the built environment imposes itself on human consciousness by creating an entirely new sense of place. It embodies in material form a spatial code onto the landscape, one that holds a social logic for human action. This is not to say that areas that lack monuments and settlements exist as an uncharted wilderness, as natural places have been shown to assume the same significance (Bradley 2000b; Gaffin 1997; Tilley and Hamilton *et al.* 2001). What is different is the decision to ground the experience of place in deliberate human constructions. Once this has happened, these places enter the consciousness of the people who live and work around them until the landscape as a whole was changed. The good preservation of upstanding houses and monuments on Scilly provides an excellent dataset for their analysis.

The majority of research carried out in Britain has been in southern Britain and this work has been largely restricted to the Neolithic and Bronze Age (Barrett 1994; Bender 1993; Bradley 1998b; Brück 1996, 1999b; Thomas 1991,1993). Although this work has added greatly to our knowledge of British prehistory, the data on which it is founded, such as post-holed architecture, barrows, cursus, henges and arable farming are only of passing relevance to the study of a stony granitic island landscape like Scilly. In part, this is because of marked differences in the character of the two areas. The landscape of southern Britain (primarily Wessex) is characterised by the rolling chalk downs, whilst that of Scilly and the uplands of south west Britain are landscapes dominated by hilltop and coastal tors and vast expanses of clitter (Tilley and Hamilton *et al* 2001). Working in a stony landscape requires a different approach to fieldwork and a different interpretive perspective. Of more relevance here are a number of regional studies carried out in south-west Britain that have developed themes and methodologies specific to working in stony landscapes (Bender *et al* 1997; Bradley 1999; Tilley 1996; Tilley and Hamilton *et al.* 2001).

The significance in prehistory of topographical features of the landscape has been a central concern of many recent landscape studies within south-west Britain (Bradley 1999; Bender *et al.* 1999; Tilley 1996). Much of this work has drawn from anthropological analogies where the importance of such features to contemporary indigenous societies has been well documented (Basso 1984; Davies 1997; Morphy 1995; Ucko and Layton 1999). A key theme that has emerged from this research is the relationship between significant topographic features of the landscape and the settings, configuration and articulation of monuments and settlements.

In Cornwall, significant nature features of the landscape, such as tors, are frequently incorporated or referenced through the construction of prehistoric monuments. Early Neolithic hilltop enclosures such as Carn Brea and Helmar Tor intentionally incorporate and encircle tors within their boundaries (Mercer 1981, 1986a, 1986b). Similarly, tors may be marked out and emphasised through their incorporation within cairns (Bradley 1999; Miles 1975; Tilley 1996b). The similarity between the granite landscapes of Cornwall and those of Scilly suggest that the significance of tors in relation to prehistoric monuments and settlement might provide a fertile field of research within the archipelago.

The importance of granite tors to the siting of prehistoric monuments in Cornwall has been demonstrated by Tilley (1996) for Bodmin Moor and by Bradley (1998b, 2000) for Penwith. Tilley's work on Bodmin Moor (1996) shows how natural features of the landscape, such as tors, are culturally appropriated with growing complexity through time, through the construction of Neolithic monuments and enclosures in a manner that takes account of natural features. Tilley (1995; 1996b) illustrates a genealogy of place, demonstrating how the significance of these tors was encoded and embroidered within the spatial dimensions of monuments and settlements. Tilley (1996b, 165) has argued for the importance of individual tors on Bodmin Moor to Mesolithic hunter-gatherers. As well as being focal points within the landscape, these tors would have been named and significant places invested with meaning. Tilley demonstrates that these tors were in effect 'non-domesticated' megaliths, imbued with cultural significance and used throughout prehistory as symbolic resources (Tilley 1996: 165). Through time, prehistoric populations emphasised the power of these natural features through incorporating and referencing them through the construction of monuments such as, hilltop enclosures, cairns and stone circles.

Through the construction of monuments, the power of the tors was captured, appropriated and controlled. This culminates in the Middle Bronze Age in the referencing of these natural features in the placement and orientation of settlements (such as Leskernick, Bodmin Moor), creating a ritualised everyday landscape of settlement (Bender *et al.* 1997). It has been demonstrated at Leskernick that settlement was laid out to create a specific relationship with the wider landscape, the orientation of doorways referencing both the older ceremonial monuments and natural significant elements of this landscape. As people moved around their domestic environment, they would have been constantly reminded of the significance of place. Through this spatial imagery we can see order and appreciate how it may have embraced peoples lives and their perceptions of the world. As noted by Richards (1996), concepts of order are cosmologically based as cosmologies allow a particular cultural understanding and characterisation of the lived and experienced world. They are therefore a way of thinking about the world through the lived experiences of individuals.

Bradley (1998a) has drawn attention to the physical similarity between Penwith chamber tombs and tors in Cornwall. He argues that this similarity is not solely the result of geology, but represents an intentional attempt by the tomb builders to appropriate the importance of tors, as symbolic resources. He suggests that to the people who lived in these areas during the Neolithic, some of these rock formations would have looked like megalithic tombs. In this sense, some tors could have been construed as the remains of above ground chambers, constructed according to a tradition that retained its importance within society (Bradley 1998a). Bradley is not however arguing that prehistoric people were mistaken in their interpretation of the world but rather that archaeologists conception of what is cultural and what is natural within the landscape is a product of recent scientific thought (Bradley 1998a: 20).

The significance of tors and in particular those adjacent to the coastline has been explored by Herring (1994) in a discussion of Iron Age cliff castles in West Penwith. He demonstrates that although these monuments have traditionally been interpreted as defended settlements the majority of them do not contain evidence for settlement and would not have functioned as defensive structures. Rather than representing settlement, Herring suggests that the primary function of cliff castles in West Penwith was the demarcation of significant coastal tors. Herring shows that that the use of these sites was not restricted to the Iron Age, as evidenced by finds of Neolithic and Bronze Age pottery such as an Early Bronze Age funerary urn found placed within a rock crevice within a tor at Treryn Dinas, near Porthcurno (Herring 1994, 52).

The difference between the studies above and a consideration of the significance of tors in my research is that Scilly is first-and-foremost an island. The implication here is that an exploration of the significance of natural landscape features, such as tors, needs to consider how such features might have been experience though movement on both the land and sea. Placing equal emphasis upon the seascape in our interpretation of the island landscape requires a different approach to fieldwork and this will be discussed further below.

Key to these discussions is the binary opposition of culture and nature within western society. The very distinction between the natural and the social world is a product of Enlightenment thought that has produced the 'othering' of nature (Eagleton 2000; Williams 1976). In many small-scale indigenous societies however, no linguistic term exists with which to separate the natural environment from society (Tilley and Hamilton *et al.* 1999). Humans are viewed as being enveloped within that world rather than being in some way separated and opposed to it. In this way, a continuum exists between humans, plants, animals, ancestors, spirits and substances (Ellen and Fukui 1996; Ingold 2001; Roe and Taki 1999).

The analysis of the prehistoric landscape of Scilly will draw from many of the themes that have been outlined within this section and in particular those that relate to south-west Britain. This research will adopt a methodology to fieldwork and analysis that advocates the centrality of the body within the interpretive process. In this way, the distribution, settings and configurations of sites will be explored through an interpretative approach to fieldwork that advocates movement on both land and sea.

3.2 Island Archaeology

The issues raised by recent studies of the prehistoric landscape, although important to the study of Scilly do not take into account that Scilly is primarily an island. In order to explore the different issues that the study of an island may raise we will now turn our attention to how islands have been studied by archaeologists.

3.2.1 Island biogeography

Early studies of island archaeology are characterised by their adoption of the theory of island biogeography. The theory of island biogeography, formulated by MacArthur and Wilson (1967), attempts to define and quantify the factors involved in the colonization of islands by plant and animal species, the survival or extinction of those species and their subsequent evolutionary development (Patton 1996: 20). The central precept of this theory, drawn from Darwinian evolutionary theory, is that islands may be used as 'laboratories' through which the laws of evolution can be explored and elucidated (Larson 2001). Although MacArthur and Wilson were not directly concerned with human populations in their development of island biogeography archaeologists have extensively used the theory to explain patterns of island colonization and the evolution of island communities (Benton and Spencer 1995; Cherry 1984; Kirsh 1986; Terrell 1986).

Evans can be credited as the founder of 'Island Archaeology' being the first archaeologist to adopt island biogeography into his research. He recognized that prehistoric island communities often possessed distinctive characteristics different from their mainland neighbours. Through the adoption of the theory of island biogeography Evans attempted to explain phenomena, such as the construction of Neolithic temples in Malta, as a result of isolation (Evans 1973,1974). Evans argued that the 'founder' population of an offshore island is likely to carry with it only a small proportion of the cultural characteristics present within its parent population and that through the physical isolation of an island such a population will experience a gradual and inevitable cultural divergence. The tendency towards monumentality and ritual elaboration within island communities noted by Evans (1974, 1977) for Malta has also been noted in the Pacific (Sahlins 1955; Vayda and Rappaport 1963). The key point to these discussions is that islands are, by their very nature, isolated and that through isolation cultural divergence is an almost inevitable outcome.

The development of Island Archaeology is most notable within the archaeology of the Pacific (Kaplan 1976; Terrell 1977, 1986) and the Mediterranean (Cherry 1981) where a major theme has been colonisation. This theme has been used to predict the chronology and process of island colonization (Cherry 1981) and the extent of interaction between island communities (Kaplan 1976; Terrell 1977,1986). A further related theme is that of 'species equilibrium', which argues that major episodes of environmental change can be detected in the long-term environmental record of islands as a result of colonisation. Kirch and Yen (1982) have demonstrated depletions in the resource base of the island of Tikopia in the Pacific that they suggest result from the human colonization of the island. In other cases, it has been suggested that the human impact of colonization upon an island's bio-environment has been so great as to cause the collapse of the island's social system, or even to threaten the survival of its human population (Bahn and Flenley 1992).

The use of the theory of island biogeography will not be pursued in relation to the prehistory of Scilly. However, the theme of island colonization, although not the main issue of this research, will need to be explored in order to explore themes such as, when and why the islands were first occupied. Recent research in island archaeology has moved beyond the paradigms and concepts of biogeography and we will now explore some of these approaches in order to access their relevance for the study of Scilly.

3.2.2 New approaches to island archaeology

The concept of islands as insular domains has dominated the interpretation of islands within archaeology (Broodbank 2000). Cultural differences demonstrated in the presence and absence of distinctive material culture and monument types between islands and the mainland, have been interpreted as the result of island societies being cut off from the currents of mainland communication. Such accounts are based upon an environmental determinist logic that presupposes that islands are necessarily isolated thereby justifying the analogy of 'islands as laboratories'. The appropriateness of this analogy has been called into question (Broodbank 2000; Robb 2001). Patton (1996) has highlighted the limitations of such a model by stressing a series of social and cultural factors that may have been instrumental in determining the colonisation and degree of isolation of islands, these include:

- Social and political motives.
- Demand for particular resources.
- The level of maritime technology.
- The extent of knowledge of tides, currents and other navigational factors.

In emphasising social and cultural factors, isolation as an 'explain all' explanation for cultural divergence becomes seriously weakened, thereby diverting our focus from explanations based upon environmental determinism to those of social construction.

The island as a unit of analysis

As Scilly comprise of a small archipelago of islands located 48km from the mainland and surrounded by the Atlantic they can be described as what Broodbank terms, perceived or true islands (Broodbank 2000, 16). However, the identification of Scilly as a perceived island does not hold the implication that the islands were essentially isolated from outside contact, as the extent to which seafaring can be demonstrated within this archipelago will play a key role in defining perceptions of insularity. It is still important to consider what an appropriate scale of analysis for Scilly should be, the individual island the archipelago the archipelago's relationship to the mainland and beyond? The answer to these questions is that all of these scales are potentially appropriate, if considered in relation to each other.

Islands hold a particular fascination for archaeologists as they are perceived as possessing a finite study area with clearly defined boundaries (Arnold 1997; Thomas 1986). However, archaeological research in the Pacific and Mediterranean has seriously challenged whether the island really represents such an idealised unit of analysis (Broodbank 2000; Gosden and Pavlides 1994).

Broodbank has stressed that the degree to which maritime trade and exchange networks can be demonstrated will have a major impact in defining the level of insularity experienced within islands. He stresses that in our analysis of islands we need to take such networks into account and consider how and by whom they were used (Broodbank 2000). In identifying maritime networks, islands can no longer be considered as inherently insular. Consequently, an island may not be the ideal unit of analysis, and we certainly should not suppose it to be so (Broodbank 2000). However, in stressing the failures of the development-in-isolation model we should be careful not to assume that islands were therefore fully integrated with mainland communities for the degree of isolation experienced by islanders may vary greatly through time.

Gosden (nd.) and Broodbank (2000) have agued that the single island does not necessarily represent the ideal unit of analysis. This is demonstrated most clearly in the Pacific where Gosden and Pavlides (1994) have shown that the sea may act as a cultural conduit between often-distant islands. This point is also illustrated by the elaborate maritime exchange networks that comprise the Kula ring of Melanesia (Malinowski 1922;Leach and Leach 1983). In such cases it is clear that the interdependency between these island groups results in the group as a whole being a more significant unit of analysis than the individual island.

Broodbank (2000) and Robb (2001) suggest that we need to look for a solution to cultural difference which views difference as the product of active social choices. Such a social constructionalist model stresses that the topography of an island does not necessarily fashion the identity of islanders but rather, that island societies create islands in the process of forming local identity. In other words insularity rather than being a biogeographical prerequisite of islands was in fact a social strategy intentionally employed by island communities to create a cultural gap between themselves and others, thereby emphasizing local identity through constructed difference.

Gosden (nd.) highlights two contrasting forms of island identity prevalent within the Arawe Islands of Papua New Guinea that he terms situated and connected identity. Situated identity is associated with where one lives and with the members of one's island community. In contrast, connected identity is associated with who one has connections with via trade and exchange. This latter category is important to my research as it stresses that the sea, rather than being liminal and acting as a barrier to communication, also holds the potential of acting as a cultural conduit through which connected identities are formed. Such an approach emphasises that island communities should not be viewed as internalised worlds because external maritime connections can equally create a sense of unity between seemingly disparate groups.

The concept of the islandscape

Broodbank uses the concept of 'islandscape' to break down our preconceived ideas of landscape and seascape, drawing us out beyond the seemingly finite study area of an island. This is not an exercise in semantics, but draws our attention to the fact that islanders' perception of their world may comprise both land and sea, with both merging into each other to form islandscape. Such a concept is particularly useful in counteracting the overriding assumption of the sea as alien and marginal and the land as familiar, representing home. This is demonstrated most eloquently by Gosden and Pavlides' suggestion that the Lapita phenomenon of south-west Oceania reflects a *colonisation of the sea*, as much as the land, with the coast a point to touch on periodically in the course of maritime movements (Gosden and Pavlides 1994: 168-169).

The theory of the islandscape is fundamental to the analysis of a small archipelago of islands like Scilly. The world of prehistoric Scillonians did not stop at the coastline and we should not assume that key issues such as, the distribution, settings and configuration of monuments and settlements only relate to the landscape. The study of an islandscape necessitates that we consider the sea, not solely as bridge or barrier to contact with the outside world (although this is obviously crucial), but as a social field. Such an approach directly challenges the prevailing idea that the sea is alien. In fact, historical and ethnographical accounts of both islanders and coastal communities, demonstrate that such an assumption is misplaced. Accounts, although frequently portraying the sea as mysterious and dangerous, show that the sea is never neutral but invested with meaning and significance (Anson 1974; Cordell 1989; Couch 1871; Davies 1989; Gill 1993). For some, no distinction is made between the land and sea whilst for others the sea is classified in a multitude of different ways through the types of animals, plants and currents that inhabit it (Akimichi 1996). These locales are known and named 'places' within the 'seascape' and form a social web that links together places, activities and memories.

Whilst acknowledging that islandscapes are made and remade by people, Broodbank (2000) stresses that they also have a physical existence, and in so doing avoids the relativistic stance adopted within many approaches to prehistoric landscape (Thomas 1993). He stresses that although islanders may have 'constructed' their islands, islands have equally constructed their islanders. Similarly, Soja states that space in itself may be primordially given, but the organisation and meaning of space is a product of social translation, transformation, and experience (Soja 1996: 89). In this way, space may be created through social action but is experienced as something real. This materiality is what Lefebrve (1991) has described as 'second nature'. By second nature Lefebrve means that space is always an interpretation, a cultural reworking of physical space produced through purposeful human action (Soja 1985: 89). Therefore, the islandscape has a physical existence but its interpretation is culturally, geographically and historically variable.

3.2.3 Island Archaeology in North-West Europe

Islands have a long history of study within British prehistory although the majority of this work has been restricted to Scotland and primarily to Orkney (Branigan and Foster 2002; Childe 1942; Renfrew 1973, 1979; Richards 1990; 1996). However, the prehistory of islands has been only a peripheral interest within the research agenda. Islands have been treated as marginal and as an afterthought to the 'bread and butter' archaeology of the mainland. The main themes that occur in studies of islands in Britain are: the exotic nature of an island community, their way of life, and their struggle against the elements: isolation, difference and marginality (Fleming 2000: 348).

One reason for this is that island archaeology in north-west Europe has not developed as a research topic in its own right but rather as a sub discipline of landscape archaeology. This has led to a general confusion as to what an island-centred approach means. Armit stresses the importance of such an approach in his treatment of the archaeology of Skye and the Western Isles (Armit 1996: 5-7). However, in practice, such an approach amounts to little more than an exercise in map reorientation, with the Western Isles at the centre and southern Britain confined to the margins. Although this exercise does begin to redress the inherent geographical imbalance present within British prehistory, it does little by way of exploring the distinctive nature of islands and their prehistoric communities. It could be argued that Armit's 'island centred geography' has more to do with Scottish post-devolution political geographies than it does with the development of island archaeology. As a consequence, islands have been studied as if they were the same as mainland landscapes with the cultural divergence observed in their monuments and material culture viewed as insignificant variations that can be smoothed out through their incorporation within a wider regional context (Malone 2001; Megaw and Simpson1979).

Deliberate exploration and colonisation of islands by people has invariable been portrayed in terms of how people have been economically driven to colonise islands (Armit 1996:34). Such studies emphasis the economic at the expense of the social, with the only relationship established between people and place being extractive. This work has been dominated by studies of the human environment, although such studies appear largely oblivious to the influence of the theories of island biogeography. This point is most clearly shown in Dimbleby and Brothwell's *Environmental Aspects of Coasts and Islands* (1981), which after 20 years remains the seminal work in its field. The volume concentrates on the ecology of both mainland coastlines and small offshore islands (including key articles on Scilly), with emphasis placed upon the human exploitation of coastal resources. However, within this work both islands and mainland coastlines are uncritically treated as if they were the same.

The stress upon an island's bio-environment, both through colonization and population pressure, has been used by archaeologists to explain the proliferation of distinctive island characteristics, such as the high density of megaliths. Renfrew (1976) argues that megaliths were used as territorial markers, suggesting that their appearance along the Atlantic seaboard of Europe in the Early Neolithic was a response to population increase. He stresses that the ecological constraints of island life may have been accentuate by the problem of population pressure. In this way, Renfrew explains the high density of megaliths on islands as a direct response to problems of population pressure and the subsequent impact on the island environment.

Three major recent research initiatives have been carried out in the Hebrides: *The Sheffield Environmental and Archaeological Campaign in the Hebrides* (SEARCH) (Branigan and Foster 1995, 2002; Branigan, Foster, Merroney and Pouncett 2000; Gilberston, Kent and Gratton 1996; Parker Pearson 1999c), the *Hebridean Iron Age Project,* (Harding 2000; Harding and Gilmour 2000) and the *South Hebrides Mesolithic Project* (Mithen 2000a, 2000b; Mithen and Lake 1996). These projects have quite different objectives and illustrate very different approaches to the archaeology of islands, particularly through their focus upon specific periods of the islands' past.

SEARCH (The Sheffield Environmental and Archaeological Campaign in the Hebrides) has produced an impressive series of monographs detailing an extensive programme of excavation and survey. Branigan states that SEARCH was set up in 1988 as a research programme that aimed to explore both the archaeology and palaeo-environment of a *marginal* landscape (Branigan 2000:1). The presumption that islands are marginal forms the starting point for this research, a presumption not challenged through subsequent work. The approach assumes that islands represent an idealised survey area where much of the cultural 'interference' found within the archaeology of the mainland is shut off through the islands apparent isolation. It provides the opportunity to study a 'pure' and timeless island culture. Furthermore, SEARCH only considers a selection of the islands that make up the Hebrides and yet lacks any clearly defined basis for the selection of the islands chosen. SEARCH has approached the islands as a number of predefined survey areas treating each as a mainland landscape. Branigan (2000) notes differences between individual islands within the Hebrides, arguing that each has a distinctive character, and uses this as evidence for lack of social contact between them. Such a conclusion has come about through the assumption that islands are marginal and isolated, a conclusion subsequently compounded through their approach to fieldwork, which takes the individual island as the primary unit of analysis. By accepting insularity as a prerequisite for islands, questions of insularity as a social construct are not considered.

Branigan acknowledges that the sea in the Hebrides was a key factor in almost every aspect of domestic life, being used as a means of sustenance and as a source of raw materials, such as pumice, flint, seaweed and driftwood collected from island beaches. He argues that the availability of these resources kept these isolated communities from starving, but that the sea provided a formidable barrier between the islands and the outside world. Branigan denies prehistoric Hebrideans the capacity to use the seaways between the islands and the mainland because of a lack of material evidence in the form of imported items such as flint (Branigan 2002). However, the sea mammal and fish bone record from the islands demonstrate evidence for deep-sea fishing and the use of boats from as early as the Mesolithic (Mellars 1987; Warren 1997). In light of this, inter-island and mainland contact would seem highly likely, especially considering the relatively short distances in question. Similarly, trade and exchange with the mainland may have been in organic materials, such as fish oil or hides, rendered undetectable within the archaeological record. Even in the absence of material evidence for prehistoric contact between the Hebrides and the mainland, it would seem safe to assume that such contacts did exist. If we except that such networks were present can we really maintain that the Hebrides were insular and marginal?

A second example of island research in the Hebrides is the *South Hebrides Mesolithic Project* (Mithen 2000a, 2000b; Mithen and Lake 1996). Warren has criticised the methodological approach of this project, noting that the landmasses of the islands separated by sea are only considered as resources, where, 'Colonsay is the meat section of the prehistoric supermarket and Oronsay the seafood delicatessen' (Warren 1997). In this way, the only human relationship between people and the islands is through the gaining of food or the procurement of stone for tools. Another feature of this approach is that the sea becomes a barrier needing to be overcome in order to carry out such subsistence strategies; it therefore reinforces the analogy of the land as home and the sea as alien. A similar scenario can be seen in Mellar's work on the island of Oronsay (1987) where emphasis is also placed upon the exploitative relationship between people and their environment

Hunter (1996) provides a chronological survey of the island communities of the Fair Isle from the Neolithic to the medieval period in which he details changes in settlement and monument construction. However, although the sea obviously played a major role in the daily lives of prehistoric islanders it does not feature in his discussion of the islands until the medieval period where it is central to discussions of island life.

Evidence for the use of the sea on Scilly throughout prehistory can be demonstrated. The initial colonisation of the archipelago during the Mesolithic provides evidence for the use of boats and seafaring skills, whilst the presence of imported artefacts and numerous middens, containing species of deep sea fish, illustrate that islanders were making journeys across the sea on a regular basis. The perceived separation apparent within the majority of studies of prehistoric islands in Britain, between a familiar terrestrial landscape and an alien seascape cannot be maintained for Scilly. My research will place emphasis upon both land and sea in the interpretation of the island landscape.

Interest in the concept of seascape has recently emerged as a topic of research within British prehistory, evidenced in papers presented at a two-day conference entitled, *Landscapes and Seascapes in Prehistory*, held at the University of Sheffield in March 2002. Interest in the sea, as a field of archaeological investigation is not new to British prehistory, but is one that has received little attention since Bowen's (1972) publication of *Britain and the Western Seaways*, (a book unfortunately published at a time when diffusionalist theories were being discredited within archaeology). The nature of research that emerged from the *Landscapes and Seascapes* conference placed emphasis upon landscape at the expense of the seascape. When the seascape was discussed, it was by way of illustrating the significance of views of the sea from prehistoric monuments. This research reduces the seascape to a neutral backdrop rather than acknowledging that prehistoric islanders and coastal communities physically engaged with the sea daily. What this type of research produces is not an understanding of seascapes but a form of: landscape archaeology with a sea view. My research will argue that the seascape, like landscape, is open to social construction and contestation and therefore cannot be treated solely as a backdrop to activity on the land.

3.2.4 Megaliths on Islands

The presence of unusual and distinctive cultural phenomena, and in particular the high concentration of megaliths, has been foremost within the study of islands in north-west Europe (Childe 1942; Hughes 1983; Scarre 2002; Renfrew 1976). In part, this has been explained by preferential preservation, a result of less intensive farming practices. However, such an interpretation cannot fully explain this phenomenon. Rather than following the lead of archaeologists in the Pacific and Mediterranean who have attempted to explain such cultural diversity in terms of the 'social construction of difference', prehistorians in north-west Europe have stressed marginality and insularity, suggesting that because of this, islands may have taken on a symbolic significance. In other words, the cultural divergence apparent on some islands is a result of people in the past viewing the perceived inherent insularity and marginality of islands as natural symbolic metaphors. This symbolic explanation of island monumentality is very old within archaeological interpretation having its roots in the work of antiquarians such as Stukeley and Borlase, who viewed islands such as Scilly to be the 'natural' resting places of druidic elders and members of an aristocratic elite (Ashbee 1980; Borlase 1756; Piggott 1950).

Scarre has attempted to account for the large number of megaliths found within the Molène archipelago of Western Brittany (Scarre 2002). Alongside the Molène peninsular Scarre sites the Isles of Scilly as an example of offshore islands with high concentrations of megaliths. Scarre points to similarities between the two island groups suggesting that the presence of large intertidal zones within the islands may be a significant determinant for the presence of such large numbers. He illustrates the predominantly coastal distribution of megaliths within these islands suggesting that such settings may be a consequence of the inherently marginal nature of the shoreline, and that such monuments are not randomly placed but are situated at significant places along the coastline, located away from zones of everyday activity (Scarre 2002:25). Scarre suggests that such spatial separation may point to a binary opposition between the living and the dead, with the resting places of the dead placed at the margins of the lived world. He interprets the settings of these monuments, in association with the shoreline, as indicative of the inherent liminality of the coastline and the sea. Scarre states that 'shores are liminal zones, the boundary between the elements, and as such, suggestive locations for contact and communication between the different realms of the human cosmos' (Scarre 2002: 26). He considers the symbolic power of the coastline as marking the boundary between land and sea just as tombs mark the boundary between the living and the dead. In this way he argues that islands are inherently liminal as shores on all sides surround them and that through such liminality the symbolic and mythological importance of an island is enhanced (Scarrre 2002: 26). The relative absence of occupation sites on the Scillies, contemporary with the chambered cairns, seriously questions the basis of Scarre's spatial opposition between 'landscapes of the living' and 'seascapes of the dead'. This approach lacks any social process to explain why cultural divergence occurs on islands and presupposes that islands are inherently marginal. Furthermore, it does not attempt to explain why islands rather than mainland coastlines, both of which may be perceived of as 'marginal', demonstrate higher concentrations of monuments. Finally, such an interpretation sets up the familiar dichotomy of: 'land as home' and 'sea as alien'.

My study differs from Scarre's in that I do not accept that the sea is inherently symbolic. I will argue that the sea attains meaning for prehistoric islanders through their day-to-day experience of it; through seafaring, fishing and hunting. My approach to the study of the island landscapes of Scilly emphasises experience and movement on the sea thereby releasing us from the static view of prehistoric islanders described by Scarre.

Hughes, in his study of the Scottish island of Arran, assumes, despite their short distance from the mainland, that the islands are inherently marginal. He argues that this perceived marginality may account for their relatively high number of Neolithic chambered cairns (Hughes 1988:52). He suggests that during prehistory Arran acted as an important source of pitchstone, and hence as a nodal point in maritime exchange. Hughes argues that through such contact the islands would have taken on symbolic and mythological importance, which in turn would have gave rise to the construction of monuments (Hughes 1988:52). I would argue that whist Arran provided a valuable source of pitchstone, the potential symbolic and mythical importance of the island derived from journeys made across the sea for it procurement rather from the stone in its own right.

On Orkney, various researchers have made observations of the distributional pattern of chambered cairns and possible influences for their locations. Childe noted that a correlation between their distribution and suitable soil for arable farming, inferring from this that proximity to agricultural land was a determining factor in their location (1942, 141). Renfrew developed this idea further by using Thessian polygons to delineate territories associated with each of the know cairns on the island of Rousay (1973, 149-150; 1979). Similarly, Fraser (1983) has argued that in any island group, the shore will be the focus of almost every human pursuit. He argues that this distribution can be explained on Orkney by the avoidance of inland locations that tend to be barren and inaccessible in comparison to the coastal fringe. Thus, the coastal location of occupation and chambered cairns is simply a reflection of the coastal location of human activity (Fraser 1983: 306-308).

Richards (1996) has sought (in his work on Orkney) to explore the relationship between Neolithic monuments and features of the topography of the islands. Arguing that monuments are constructed to incorporate visual imagery drawn from the natural world and through the construction of monuments at specific places, a cosmological order may be identified. He describes the stone circle and henge monuments of the Stones of Stenness and the Ring of Brodgar as being respectively situated on two narrow promontories that separate the lochs of Harray and Steness, which in turn are surrounded by hills which form the large bowl of western Mainland Orkney (Richards 1996: 203). Richards argues that by virtue of these monuments settings, they are given the appearance of being surrounded by water and enclosed by encircling hills. He argues that the internal ditch and external bank that form these henge monuments would have contained water and therefore may reference and embody the local topography, representing a microcosm of the island landscape. Therefore, the topographical settings and construction of such monuments may denote a symbolic and cosmological order of the island world that prehistoric Orcadians inhabited. Although Richards' work explores the potential of such monuments to encapsulate landscape, the fact that Orkney is an archipelago of islands and that this may be significant, is unfortunately underplayed in his analysis and interpretation.

On the Isle of Arran, Jones and Taylor (1996) have demonstrated that many Neolithic chambered tombs align themselves on islands offshore. Similarly, the Thoms believed a number of standing stones on the Outer Hebrides to be aligned with St Kilda (Thom and Thom 1990). Whether the detailed alignments described by the Thom's are valid is not significant here but the fact that monuments align on an island, or are located in a position from which Islands are visible is not coincidental.

In order to test such observations in a quantifiable way Woodman has used the GIS technique of *viewshed analysis* to explore the significance of the settings of Orcadian chambered tombs (Woodman 2000). She has shown that the distribution of such tombs is predominately coastal and that the view from such settings is dominated by views across the sea. Woodman tested the viewshed from the tombs against a generated random distribution of points from around the coastline in order to ascertain whether view was a significant factor in their landscape setting. The result of her analysis confirmed that view was indeed significant in the setting of tombs and that such settings were selected to maximise view across the sea. Woodman concludes that her research indicates that Orcadian chambered tombs are located in regard to visibility; and that visibility *from*, rather than visibility *of* a tomb appears as an over riding concern in their landscape setting.

Although Woodman emphasises the importance of views over the sea in the placement of tombs, she ignores the fact that her findings also imply that such tombs are equally visible *from* the sea and that the key to their settings may be linked to maritime rather than terrestrial perceptions of the environment. For Woodman the world of prehistoric Orcadians stops at the shore, with the sea only considered as resource or metaphor. Similar conclusions to Woodman have been made for the importance of proximity and visibility over water in the placement of Bronze Age cairns in Sweden (Bradley 1997) and on the Isle of Mull (Fischer *et.al* 1997). Such studies, enlightening as they are, remain 'landlocked' ignoring the potential of the sea as a social '*landscape*'. We must remember that islanders did not just gaze across the sea, but physically engaged with it on a daily basis. The sea was not inherently symbolic but achieved significance through dwelling within the island landscape.

My research will avoid the land-locked approach of the above studies by exploring how a different perspective of an island landscape can be experienced when we move around an island's seascapes. My research on Scilly will explore how the distribution, settings and configuration of monuments might relate to movement and activity (i.e. fishing) on the sea.

It is clear from this brief account of how islands have been approached within the prehistory of north-west Europe that much of the complexity of island life has been omitted. In these accounts, islands have been predominantly thought of as marginal and insular with questions of island social construction and identity overlooked in favour of questions of economic and environmental exploitation. The analysis of island landscapes of Scilly requires that we take account of the interpretive perspectives developed within both landscape and island archaeology.

3.3 Creating a methodology

The nature of the island landscape of Scilly requires the creation of a methodology to fieldwork, analysis and interpretation, which takes into account both the landscape and seascape of the islands. The data on which this research is based was gathered, between 1999 and 2002, through fieldwork carried out on the islands and through the study of museum and archive collections. The important methodological themes of my research include:

- The creation of a chronological framework for Scillonian prehistory
- Reconstructing the prehistoric configuration and environment of Scilly
- A methodology to fieldwork on both land and sea

3.3.1 Artefact studies

The study of museum collections was an important aspect of my research. The lack of a chronological framework for Scillonian prehistory was a major problem that needed to be addressed. In order to create a chronological framework a study of Scillonian artefacts (primarily pottery) held within museum collections was carried out. The museum collections examined were: the Isles of Scilly Museum, the Royal Cornwall Museum, Penlee House Museum and the British Museum. Research into these collections was undertaken to establish the contexts from which artefacts had derived and to identify chronologically distinctive artefact types. The examination of pottery was carried out using a x10 hand lens and using the guidelines for pottery analysis and description set out by the Prehistoric Ceramics Research Group (1995). The analysis of these artefacts will be used in Chapter 5 to construct a chronological framework for Scillonian prehistory.

These artefacts collections were also examined as a means of clarifying the economic basis of Scillonian society such as the identification of large quantities of fishing weights and net sinkers, highlighting the importance of the sea (Chapters 4 and 8). Lastly, artefacts were examined to identify evidence for imports, such as imported stone tools and metalwork. This information will be used (Chapter 8) to ascertain the degree to which the islands were isolated from the outside world, providing evidence for social interaction and identifying the degree that raw materials and material culture were moving across the ocean. Evidence for contact with the outside prehistoric world will be accessed against evidence for prehistoric seafaring from elsewhere in north-west Europe (Johnstone 1988; McGrail 1981; Wright 1990).

3.3.2 The early environment of Scilly

My research requires that I explore the effect of prehistoric sea-level changes upon the configuration of the archipelago's coastlines. The reconstruction of the prehistoric coastline is fundamental to ascertain potential relationships between prehistoric settlements, monuments and the coastline. The degree of prehistoric sea-level changes within the archipelago will be explored using available radiocarbon dates and palaeo-environmental data (Ratcliffe and Stralker 1996). The character of the prehistoric coastline will be addressed through a study of long-term patterns of coastal evolution (patterns of erosion and deposition). The above issues will be explored on Chapter 4.

An important aspect of this reconstruction was the aim of identifying landing and launching places. Such places, as well as potentially playing a major role in daily life, could also have been important as places where strict codes of interaction were acted out and used to formalise social relations between islanders and the world beyond. Such potential places were identified through the exclusion of all sites unsuitable for the launching, landing and stowage of boats such as cliff-faces and coastal areas exposed to high winds and strong currents. The identification of landing places will be used in Chapters 6 and 7 to explore potential relationships between the location of prehistoric settlement and monuments with movement on the sea.

The prehistoric bio-environment of Scilly will be assessed, in Chapter 4, through a reconsideration of available palaeo-environmental data, including: ancient pollen, plant macro fossils and animal bones. Ancient pollen and plant remains are used to identify different ecological zones, such as saltmarsh, heathland, woodland and farmland, which might once have comprised the prehistoric island landscape. The identification of farmland and in particular evidence for agricultural crops will be used to question the economic basis of Scillonian prehistory. The identification of plant communities and ecological zones within the island landscape of Scilly will provide an environmental context for prehistoric settlement and monuments.

Animal bones will be used to identify domesticated and wild animals exploited by prehistoric Scillonians and thus suggest the social and economic basis of prehistoric Scillonian society. The identification of bird species from prehistoric bone assemblages will be used to identify and confirm the presence of particular ecological zones within the archipelago, such as sandflats, marshland, woodland and farmland. Through the identification of these ecological zones a clearer picture of the character of the island landscape, and thus the context of prehistoric settlements and monuments, will be gained.

The identification of fish bones from prehistoric bone assemblages will be used to identify the importance of sea resources for prehistoric islanders and the types of locales visited within the seascape. The sea around Scilly possesses distinctive maritime environments, largely defined through sea depth and the nature of the seabed, thus providing clearly defined ecological zones within the seascape (www.english-nature.org.uk/uk-marine). These 'sea-zones' can be identified and mapped on nautical charts (British Admiralty 2001) and the habitats of species of fish and sea mammals, both found within the prehistoric archaeological record of the islands, can be matched to these maritime environments. In this way, we can identify both the types of animals hunted and areas of the island landscape visited by prehistoric Scillonians. As movement at sea is largely dictated by the temporal cycles of tides, my research used tidal charts to identify the most likely routes taken whilst navigating the islands seascapes. This evidence for movement on the sea will be used in Chapter 7 and 8 to explore potential correlations with the landscape settings and architectural configurations of prehistoric Scillonian settlements and monuments.

3.3.3 Fieldwork methodology

Fieldwork on Scilly was not without its problems; impenetrable vegetation (gorse, bracken and heather) covers much of the islands making fieldwork difficult between April and November. In order to maximise visibility on the ground, fieldwork aimed at locating and recording archaeological sites was carried out during the months of January and February. Further fieldwork, to explore relationships between prehistoric sites and the island landscape, was carried out in August and September. Between 1999 and 2003, approximately 15 weeks of fieldwork was carried out on Scilly. All of the islands that comprise Scilly, where archaeological sites are recorded on the SMR, were visited in the course of fieldwork.

No single theoretical or practical approach was adopted throughout this research. However, the overriding approach to fieldwork was phenomenological, in that research questions and fieldwork strategies evolved from being in and experiencing the island landscape. Initial fieldwork entailed visiting prehistoric sites within the archipelago and recording their relationship to the island landscape such as: their topographic settings, their proximity to the ancient coastline, their spatial relationship to tors, the orientation of house doorways and burial chambers etc. The data derived from initial fieldwork was used to explore themes and allow cross comparisons to be made between sites. Though the analysis of this data further research questions were formulated, such as: to what degree are entrance graves located within the landscape to be inter-visible with each other? These new research questions formed the basis for further fieldwork. My approach to fieldwork and analysis formed a sequence of knowledge construction.

Fieldwork recording methods included: keeping detailed field notebooks, the annotation of existing plans and site maps, the measured drawing/planning of sites and photography. Published plans and distribution maps of archaeological sites together with site descriptions, taken from the Site and Monument Record and Ordnance Survey index cards, were used as the basis for initial fieldwork. This pre-existing dataset was used as the basis for 'walk over surveys' where plans and maps of sites were annotated and interpreted. When necessary, plans were updated or new ones produced. As well as providing a method of recording field data, the drawing of the archaeological record was central to the investigative and interpretative process. The drawing process was used not only as a means of visually representing monuments but as a way of developing a detailed knowledge and understanding of the complexity of the Scillonian archaeological record.

The photographic recording of sites formed an important aspect of this research, providing both a way to visually represent the islands archaeological database and as an interpretative tool. Photographs were systematically taken at each site visited during fieldwork in order to record aspects of their landscape setting, such as: what elements of the island landscape could be seen from each site? These photographs were used to explore potential themes, such as proximity of settlement and monuments to tors, that might have been missed during fieldwork. Photographs were used as part of the research process, to identify potential themes that could be addressed further and clarified through fieldwork. This data will form the basis for the analysis of settlement and monument distributions, settings and configurations.

Other aspects of prehistoric sites such as the orientation of house doorways and the chambers of entrance graves were recorded. In each instance, orientation was taken with a sighting compass and recorded as looking out and through chamber entrance or doorway. Similarly, the axial orientations of cists, where extant, were recorded. In the case of sites that have been destroyed, orientations were taken from published and archival plans and field notes. As well as orientation, a written and photographic record was made of what parts of the landscape and seascape could be seen from each monument and settlement. In each instance visibility and proximity too other sites and prominent topographical features was recorded. This data was used as the basis for exploring intervisibility between prehistoric sites within the archipelago. This work was carried out in order to access whether meaningful association could be determined between sites and the surrounding island landscape.

As result of the excellent preservation of some prehistoric settlements on Scilly, it was possible to examine the internal spatial organisation of houses. These houses contain a variety of internal features, such as: hearths, partition walls, paving and stone furniture. The identification of internal features was recorded through fieldwork and from published plans. This recording enabled the internal ordering of household space to be compared and contrasted. This data will be used in Chapter 6 to explore the potential significance of spatial and chronological changes within settlements.

Distinctions between 'natural' and culturally placed stones, within houses and monuments, were identified using criteria and techniques developed within geology and geomorphology (Sellier 1991; Tilley and Hamilton *et al.*2001) Once identified, the positions of natural ground-fast stones were recorded and annotated on individual site plans to allow cross comparison and analysis. This data will be used to assess whether the incorporation of natural earth-fast stones was significant to the construction of houses and monuments on Scilly and whether any discernable pattern of its incorporation can be determined.

Data collected, through fieldwork on Scilly and research within museums and archives, was stored and manipulated within a computerised relational database. This database was constructed in order to be searchable and have the capacity to be expanded and linked to others. Records on this database are linked with Ordnance Survey co-ordinates to allow information to be expressed spatially.

Working on the sea

One problem that emerged during fieldwork was that if we accept island landscapes to comprise of a seamless interface between land and sea, archaeological fieldwork needed to be undertaken on both land and sea. In order to fulfil this need fieldwork was carried out using a sea kayak. This mode of transport proved to be ideal for conducting sea-based fieldwork on Scilly, allowing access to numerous small inaccessible islands that would otherwise have had to be excluded from this research. The lightness and stability of the kayak used enabled large expanses of sea to be covered in relatively short periods and allowed landing on rocky coastlines that could not be undertaken in a larger boat. Fieldwork was carried out over a period of six weeks during August and September 2002. Sea based fieldwork was carried out in all areas within the present day 20m marine contour with the exclusion of the dangerous seas around the Western and Northern rocks (Fig. 4.1).

In contrast to fieldwork on the land, no pre-existing dataset or methodological framework could be used to inform research on the sea. The initial intention of using a kayak on Scilly was purely for practical and economical reasons (access to isolated islands, cut down on the expense of hiring a boat and crew), however, the process of making "self-powered" journeys on the sea quickly became part of my fieldwork methodology. By paddling a kayak on the sea, a new perspective was gained of the island landscape. Firstly, I became aware of the importance of a detailed knowledge of: tidal currents, the wind and wave patterns, for movement on the sea. Secondly, through journeys made across the sea I gained a new perspective of the interrelationships between landmarks, sight lines and prehistoric sites, which I would otherwise not have appreciated.

Pilotage within coastal waters relies upon the recognition of landscape features (usually coastal tors and headlands) distinguishable from the sea, used by seafarers to locate their position (Brandon 1984, 1999; Goulder 1989; Norm 1980). In this way, it can be argued that a knowledge of the land helps to demarcate and know about the sea. Knowledge of many of these wayfaring points amongst present day fishermen are closely guarded as they refer to good locations to place lobster and wrasse pots (Gaffin 1996; Herring pers.com). The identification of wayfaring points within the islands was identified through discussions with members of the Isles of Scilly Boatman's Association and through the study of contemporary and historic pilot guides to the islands (Brandon 1999; British Admiralty 1998, 2001; Corporation of Trinity House 1808, 1749). This information was used in order to assess whether relationships existed between prehistoric sites and pilotage points. This data was checked, where possible, from the sea by boat or sea kayak.

My methodology for recording these inter-relationships was fundamentally led by movement. For example, on a return journey made from the Eastern Isles to St Martin's, I noticed that a standing stone at Higher Town was visible upon the sky line of St Martin's. This observation was then be used to determine whether other standing stones within the archipelago were equally visible from the sea; as such, my approach to fieldwork on the sea was incremental. Observed relationships between sites on land and movement on the sea were recorded via a portable dictatphone and disposable waterproof camera. Whilst the former method of recording proved useful the photographs produced by the latter, whilst sufficient for analysis were of insufficient quality for reproduction in this thesis.

Final statement

Before we move on to explore the significance and meaning of the prehistoric island landscape of Scilly we must first attempt to reconstruct the past environmental setting of the islands. This will be the subject of the next chapter where I will outline the islands submergence, geomorphology oceanography and bioenvironmental history.

4. RECONSTRUCTING THE PREHISTORIC ISLAND ENVIRONMENT OF SCILLY

The Isles of Scilly have undergone considerable environmental changes since prehistory caused by both rising Holocene sea-levels and human intervention. This chapter will explore these changes in order to provide a clearer picture of how the islands may have appeared during prehistory and hence the nature of the island settings of settlement and monuments. This analysis and reconstruction of the ancient island landscape will then form the basis for subsequent analysis.

4.1 The modern island landscape of Scilly

The Isles of Scilly comprise of *c.*200 'named' islands, although the vast majority of these are devoid of terrestrial vegetation and soil and project only a few metres above mean sea level (Fig. 4.1) A list of the main islands and islets is given in Appendix B. The geology of the islands is dominated by granite, which is part of a single batholith now exposed as six cupolas, five on the mainland, represented by Dartmoor, Bodmin Moor, Carn Menellis, and West Penwith and one now largely isolated by submergence forming Scilly (Scourse 1986: 5). Barrow (1906) notes differences within the granite of the islands, which he divides between coarse and fine-grained. The fine-grained occupies a roughly central place within the islands and is intrusive within the coarse grained (Scourse 1986: 8, fig.8).

The seven largest islands of Scilly are: Annet, Bryher, Samson, St Agnes, St Martin's, St Mary's and Tresco. To the east and north of the archipelago the Eastern Isles and St Helen's group form small clusters of islands and islets whilst to the north-west and south-west are the infamously dangerous, Northern and Western Rocks - substantial rocky islets, pinnacles and ledges – the scene of numerous shipwrecks. Today's islands form a ring of higher ground encircling a central lagoon of shallow water. The sea on the Atlantic coast drops sharply to fifty metres, whilst the central lagoon is but a few metres deep (Fig.4.1). The contrast between this calm lagoon and the swell of the open Atlantic is reflected in the formation of the islands' coastline. The crenulated Atlantic coastline of Scilly is comprised of precipitous granite cliffs, high stacks of isolated rock and steep boulder beaches. The inner coastline is interspersed with granite outcrops and low cliffs of periglacial granitic head or ram with sheltered, sandy beaches. Although the islands are ravaged by winter storms that produce Atlantic rollers in excess of 20m the semi submerged rocky ledges and pinnacles of the western and Northern Isles break these waves before they reach land leaving the central lagoon that separates St Mary's, Samson, Tresco and St Martin's protected (Heron 1982).

The maritime topography of Scilly's inner lagoon changes constantly, depending upon atmospheric pressure, wind speed and direction, and the cycles of tides. During exceptionally low annual tides, extensive sand flats are exposed on the shores of the northern half of Scilly, linking together the islands of Bryher, Tresco and Samson. A further drop in sea level of 10m would re-unite all islands except St Agnes and Annet. In contrast, when correspondingly high tides occur in conjunction with strong winds, waves frequently break through coastal defences causing flooding within the islands interior.

The islands are low-lying the highest point being Telegraph Hill, St Mary's at just over 50m OD. Although low in altitude, the archipelago reaches out for more than 16km (Round Island to Western Rocks), producing a feeling of horizontal space. Moving between the islands by boat their scale and configuration is difficult to judge with the variety of shapes and profiles that rocks, islets and islands' present against sea and skyline providing a baffling spatial experience of rapidly changing silhouettes.

Extensive areas of heathland are found around the Atlantic coastline of the islands, most notably on Shipman Head Down, Bryher; Castle Down, Tresco; Chapel Down, St Martin's; Normandy Down, Porth Hellick Down, and Salakee Down, St Mary's and Wingletang Down, St Agnes. Fresh and brackish water pools and areas of marshland are found at, Higher and Lower Moors, St Mary's; Great Pool and Abbey Pool, Tresco; Big Pool, St Agnes, Big Pool, Bryher; and Town Pool, St Martin's (Fig. 5.1). The only free running stream on Scilly flows between Holy Vale and Porth Hellick Bay, St Mary's.

Entry and approach to the islands by boat is from the east via Crow Sound or St Mary's Sound, although entry from the north is possible through Tean Sound (Brandon 1984, 1999). An approach from the west or south-west is extremely dangerous even in perfect conditions. The Western and Northern rocks dominate the sea to the west and south-west of the islands, here tides run strong with confusing eddies and overfalls. These waters are given the highest rating possible by the British Admiralty, ranking them amongst the most dangerous in the world (Doodson and Warburg 1973; RYA 1981). The dangerous nature of the seas around Scilly structures how the archipelago can be navigated. The significance of this structuring of movement and its significance to the interpretation of the prehistoric island landscape will be developed in subsequent chapters.

4.2 The exploration of a drowned landscape

Archaeological visitors to the islands have found themselves inescapably involved in the 'Lyonesse' problem (Ashbee 1974). Put simply the problem is how large a landmass was Scilly between about 3000BC and AD 500, the period of time that encompasses much of the evidence for its early occupation? The archaeological significance of sea-level change on Scilly was first recognised over two and a half centuries ago by William Borlase (1753, 1756). Borlase noted field walls descending from the North Hill of Samson and "running many feet under the level of the sea towards Trescaw (Tresco)", and noted that shifting sands often revealed "hedges and ruins" on the flats between Tresco, Bryher and Samson (Fig. 4.2). Borlase concluded that this was evidence for these three islands having once been a " continuous tract of land" (Borlase 1753).

4.2.1 Past studies of sea-level change

The presence of both intertidal and submerged archaeological sites demonstrates that sea-level change has occurred on Scilly, but the rate of this inundation is still open to debate (Thomas 1985; Ratcliffe and Stralker 1996). Although many writers have considered the submergence of the islands (Ashbee 1974; Crawford 1927; Daniel 1950, 25-26; Hencken 1932; O'Neil 1949, 4), the first coherent archaeological model pertaining to submergence was formulated by Thomas (1985).

Thomas' model was based upon fieldwork carried out by himself and Fowler (Fowler and Thomas 1979; Thomas 1979a, 1979b). In the absence of radiocarbon dates from the intertidal zone, to calculate sea-level change, Thomas used the altitudes of submerged and intertidal archaeological sites that could be broadly dated through associated artefacts or by analogy with dated sites found elsewhere in south-west Britain. His model is based upon the hypothesis that sites are situated at their Minimum Occupation Level (MOL) for the period that they represent. MOL is an abstract concept based upon the observation that the best contemporary settlement in Scilly, to avoid exposure to the wind, is usually sited at the lowest available contour, which Thomas gives as 5.3m above mean sea-level (MSL). He suggests that such a location is favoured because it offers maximum shelter from winds, exploitation of the deepest soil, and access to the sea.

Thomas produced a sea-level curve for Scilly by plotting on one axis the vertical position of intertidal sites in relation to present day mean sea-level (i.e. Ordnance Datum) and on the second axis the estimated date of these sites. Based on the assumption that each site was originally located at MOL Thomas was able to calculate the relationship between each site and its contemporary mean sea-level by subtracting 5.3m in each instance (the difference between MSL and MOL). The index points created could then be transformed into a curve by drawing a 'best fit' line through them to represent mean sea-level for the period 4000 cal BC - cal AD 1000 (Thomas 1985, fig. 2). This curve suggests that around 3000 BC, mean sea-level was almost 17 metres below that of today, representing an average yearly rise in sea level of 2.1-2.6 millimetres, (21-26 centimetres every 100 years and 2.1-2.6 metres every 1000). Thomas suggests that today's configuration of islands did not complete formation until relatively recent times and that until the end of the Roman period all of the islands (excluding St Agnes, Gugh and Annet) were joined together at high water.

Thomas' model of submergence potentially overplays the rate of sea-level change and is based upon two questionable assumptions, the dating of archaeological sites in the intertidal zone and his concept of minimum occupation level. The intertidal remains identified by Thomas can be assigned to periods other than those chosen and his concept of minimum occupation level is speculative. If we plot Thomas' data for *c*.3000 cal BC onto a contour map, we can see that the islands comprise a single large landmass with two smaller islands to the south-west formed by Annett and the Western Rocks (Fig. 4.3). A sharp drop in marine topography marks out this island configuration. The significance of this is that even if sea-level rise was of a much greater magnitude than postulated by Thomas the island configuration would be altered little as a consequence. Therefore, the island configuration represented in Fig 4.3 provides a useful index point marking out one extreme of the effect of sea-level change to the character of the ancient coastline. In order to refine the model we will now explore how sea-level change has been studied by archaeologists, geologists and oceanographers in south-west Britain and assesses the relevance of these studies to the problem of the drowned landscapes of Scilly.

4.2.2 Measuring sea-level change

Sea-level change is the result of a combination of variations in regional eustatic sea-level and the rate of crustal subsidence or uplift (Shennan 1994: 49). Changes in sea-level are recognized in south-west Britain through the presence of intertidal and submerged peat deposits and forests. Submerged forests represented by fossil trunks, roots, branches and peat deposits are recorded on and beyond the foreshore at many places in Cornwall and Devon (French 1985; Healy 1995). The altitudes and radiocarbon ages of this material can be used to construct curves of relative sea-level, if the relationship of the dated material to its contemporary sea-level is known (Heyworth and Kidson 1982). This latter requirement demands a combination of lithostratigraphic, biostratigraphic and chronometeric techniques to determine under what environmental conditions this material formed. (Healy 1995).

Curves of regional sea-level change have been produced in the south-west for: the Bristol Channel, English Channel, Cardigan Bay, Somerset Levels and trackways, North Wales and Marazion Marsh (Healy 1995; Heyworth and Kidson 1982; Selwood *et al* 1999)) (Fig.4.4). Heyworth and Kidson (1982) argue that there is no real difference between these curves, however, Healy (1995) argues that the sea level index points used by Heyworth and Kidson probably mask considerable site specific variability in the data caused by embayed environments forming behind storm beaches and coastal bars. The significance of the formation of embayed environments on Scilly will be explored further below.

The marine shoreline is defined by sea level, the major perceptible variation in sea-level being the twice-daily fluctuation of the tide. Tides are water's response to the gravitational attractions of the moon and sun, the strongest tides (spring tides) occurring when the sun and moon are directly in line. Consequently, experience of an island or coastal landscape is temporal and influenced by tidal range (taken here to be the difference between the highest and lowest normal tide [i.e. mean high spring tide and mean low spring tide (Fig. 4.5)]. As tides are primarily the result of the gravitational forces of celestial bodies (principally the moon and sun), it is accepted that during the past 7,000 years the tidal range within British waters has remained consistent with those today (Doodson and Warburg 1973; McGrail 1998, 258; Tait and Dipper 1997, 256-260). Differences in tidal range are caused by coastal topography with the greatest ranges occurring within estuaries, bays and inlets, such as the Bristol Channel where a tidal range in excess of 9m occurs. The tidal range on Scilly is 5m. Comparisons between the tidal ranges for Scilly and west Cornwall show only small differences (Fig.4.6). The implications of this for our consideration of the prehistoric island landscape of Scilly are:

- That models for sea-level change in the south west and in particular West Cornwall can be used as a basis for the calculation of similar changes on Scilly.
- That although differences in island coastal topography such as sandbanks, fetch and water depth would have resulted in different tidal patterns between the islands, the

overall pattern of tidal movements around the islands would probably have been as it is today (Devoy 1982:85,).

4.2.3 Reassessing sea-level change on Scilly

In this section, I will provide an overview or recent environmental work carried out on Scilly in order to reconsider the rate of prehistoric sea-level changes. This work will then be used as the basis for the construction of a sea-level curve for the archipelago, through which, the likely character and configuration of the prehistory archipelago may be assessed.

Intertidal Deposits

Between 1989 and 1993 fieldwork carried out by the Cornwall Archaeological Unit and English Heritage has discovered peat deposits within the present day intertidal zone of Scilly (Ratcliffe 1990; Ratcliffe and Stralker 1996). These deposits were recorded and sampled from: Crab's Ledge, Par Beach and Porth Mellon (Fig. 4.7). Analysis of these deposits included, radiocarbon dating and the recording of their stratigraphy in relation to Ordnance Datum (OD), thereby determining the height and date at which these deposits formed. In order to determine under what conditions these deposits formed, and therefore their relationship to ancient sea level, biostratigraphical and lithostatigraphical analysis was carried out. Analysis involved the examination of sediments for evidence of terrestrial to marine transitions indicating environmental changes due to sea level fluctuations (Shennan 1994). This has included the study of ancient pollen (Ratcliffe and Stralker 1996), plant macro fossils (Ratcliffe and Stralker 1994), diatoms (Cameron 1994) and foraminfera (Godwin 1994). The sample numbers used in the following discussion refer to those sited in Ratcliffe and Stralker 1996.

Crab's Ledge, Tresco

The first of the intertidal deposits that we will consider is Crab's Ledge, where three peat deposits were sampled, dated and analysed (Ratcliffe and Stralker 1996, 20-22) The uppermost deposit (Sample 7345.1) was exposed within the intertidal zone whilst a further two deposits were located by augering at depths of 0.97-0.87m OD (Sample 7345.2), and 0.87-0.78m OD (Sample 7345.3) (Fig 4.8).

The radiocarbon dates from the base and surface of the highest deposit produced radiocarbon dates of 195 cal BC- cal AD 227 (GU-5057; 1980 ± 100BP) and cal AD 43-339 (GU-5056; 1880 ± 100BP). Though the calibrated date ranges span a relatively large period, they indicate that the peat began forming some time during the first century BC/AD and were still forming during the second century AD. Unfortunately, the radiocarbon results taken from the two lower peats (Samples 7345.2 and 7345.3) were contaminated, (probably from the mechanical auger used to take the samples [Ratcliffe and Stralker 1996, 22]), and have consequently not been satisfactorily dated, although they clearly stratigraphically pre-date radiocarbon date GU-5057 taken from the base of the upper peat (Sample 7345.1).

Pollen results taken from all three samples were broadly similar, with low levels of tree and shrub pollen (only 8% TLPS [total land pollen and spore] in the lowest peat [7345.3] and less in the other samples). Pollen of coastal and salt marsh plants dominates, with other more general open ground *taxa* also present (Ratcliffe and Stralker 1996, 117, table 34).

Poor recovery rates of plant macro fossils occurred within the samples and Stralker suggests that this scarcity may indicate that these deposits were located high up within the intertidal zone and therefore subjected to continuous wetting and drying (Stralker 1996). Those macrofossils that survived were dominated by salt marsh species of grass, rushes and seablite, all of which could have grown along the strand line or within dunes a context that appears confirmed by the presence of marine and *mesohalobous* (brackish water) diatoms (Godwin 1994).

In summary the analysis of the intertidal peats at Crab's Ledge suggest that they formed in an open coastal environment, with little or no woodland in the vicinity, under salt marsh conditions and subject to periodic marine inundation. The significance of these findings for the construction of a sea-level curve for Scilly is that when these deposits formed, during the Late Iron Age/Romano-British Period, they were located close to the ancient coastline.

This conclusion is contrary to Thomas' model of submergence that postulated this locale to have been part of a large central terrestrial plain during prehistory (Thomas 1985).

Par Beach, St Martin's

On Par Beach, a stratigraphic sequence of five intertidal deposits was recorded, sampled, analysed and dated (Ratcliffe and Stralker 1996, 17-20). These deposits, starting from the highest and hence most recent are: Samples 7661.03; 7661.01; 7661.02; 7661.04 and 7661.05 (Figs.4.9 and 4.10). Analysis and dating was carried out on all five deposits. Analysis revealed that, as at Crab's Ledge, two of the samples used for radiocarbon dating were contaminated by the mechanical auger (Ratcliffe and Stralker 1996, 19). However, the remaining three radiocarbon dates provide a chronological framework for the five successive phases of peat formation at Par Beach. The radiocarbon dates of the remaining three deposits, demonstrate that the lowest (Sample 7661.02) began forming during the Late Mesolithic/Early Neolithic producing a date of 4220-3955 cal BC (GU-5061; 5210 ± 50BP). This date is confirmed by a second radiocarbon date derived from a piece of oak embedded within this deposit and dating to 4360-4043 cal BC (GU-5222; 5410 ± 70BP).

The middle peat (Sample 7661.01) deposit was shown to have formed during the Later Neolithic and has provided a date of 3486-2933 cal BC (GU-5060; 4510 ± 60BP). This sequence is terminated by the highest deposits on Par Beach (7661.03) that formed during the Romano British and early medieval period, dated to cal AD 393-616 (GU-5062 1570 ± 50BP). The two peats from the auger core (Samples 7661.04 and 7661.05) although undated are statigraphically below PRN 7661.02 and therefore must be considered to be pre-Late Mesolithic in date. The sediments that separate these two deposits comprise of layers of silty clays and angular gravels deposited by water, suggesting that peat formation on Par Beach, from at least as early as the fourth millennium BC, was periodically halted through inundation (Ratcliffe and Stralker 1996, 24, fig. 23).

The earliest pollen sample was taken from a buried peat (Sample 7661.04) that was stratigraphically pre-Late Mesolithic. This assemblage is dominated by *taxa* indicating an open coastal location with some trees and shrubs (25% TLPS) and several salt marsh and strand-line plants. Pollen derived from the lower section of the Late Mesolithic peat

(Sample 7661.02) shows greater evidence of woodland cover in the vicinity, with trees and shrubs accounting for 70% TLPS; hazel and oak were initially dominant, but a rise in birch and decline in hazel followed. In contrast, samples from the upper section of this deposit (Sample 7661.02) contained less tree and shrub pollen and more grasses and sedges, suggesting that a wet sedge fen had developed. This difference may be explained by the fact that the upper section of this peat was taken at a sample point higher up the beach than the lower. Unfortunately the Middle / Late Neolithic peat (Sample 7661.01) contained no pollen and so the possible change to a wetter, more open environment that is suggested above, was not substantiated. However, from samples taken from sample 7661.03 (the most recent of the peats) it is clear that by cal AD 393-616 open conditions dominated by grasses, sedges and a range of herbs colonising sand dunes had become established. The increase in heather pollen to 10% TLPS is particularly noteworthy as heather tetrads do not travel far from their source of origin and indicate local growth (Ratcliffe and Stralker 1996, 19).

Samples were assessed for plant macrofossils but preservation was poor and gave little useful information except from the most recent of the deposits (Sample 7661.03). This deposit comprised a freshwater and marsh assemblage (sedges, marsh pennywort, lesser spearwort, water crowfoot scarlet pimpernel and rushes), which would most likely have been growing within wet dune slack.

Samples were assessed from Par Beach for the presence of diatoms, but preservation was mostly poor, abundance low and only a limited range of *taxa* identified (Ratcliffe and Stralker 1996, 20). However, the exposed Middle/Later Neolithic peat (Sample7661.01) was shown to contain several *taxa* typical of terrestrial habitats and the Late Mesolithic peat (7661.02), contained *taxa* characteristic of brackish marshland and ephemeral habitats such as wet dune slacks *(ibid.)*.

The extent of marine influence on the formation of some of the Par Beach peats is unclear. Diatom preservation was poor, although freshwater and brackish water diatoms were found in deposits, dated to the Late Mesolithic and Early Neolithic. The established woodland indicated by the pollen in this peat is broadly comparable with that identified at a similar period from Higher Moors, St Mary's (Scaife 1983, 1984). The Late Neolithic peat, in which no plant macrofossils or pollen were preserved, contained terrestrial diatoms, suggesting that this layer may originally have been an organic soil that subsequently become waterlogged (Stralker 1992). Many charcoal fragments found in both this and the earliest peat might have originated from human activity in the vicinity. Thus, the radiocarbon dates from these layers could indicate the date of activity taking place a little above the contemporary high tide line, or around the edges of freshwater pools on low lying land not flooded by the sea.

The variability of the environmental samples taken from Par Beach suggests that periodic fluctuations between, terrestrial to maritime habitats occurred throughout prehistory. These results are suggestive of the formation of organic deposits behind storm beaches and the subsequent periodic breaching of such barriers. It is significant that the earliest deposits from Par Beach, sample 7661.02 (dating to the Late Mesolithic) and 7761.04 (located stratigraphically below sample 7661.02 and therefore pre Late Mesolithic), show evidence of marine influence suggesting that when they formed they were in close proximity to the ancient coastline.

Porth Mellon, St Mary's

At Porth Mellon, two intertidal deposits were sampled, dated and analysed (Ratcliffe and Stralker 1996, 24-26). Preservation of palaeo-botanical remains was better at Porth Mellon than at other intertidal peats on Scilly allowing detailed analysis (Ratcliffe and Stralker 1996, 105-129). The lower peat exposure, located just below mean low spring tide (MLST), produced a radiocarbon date of, 3085-2765 cal BC (GU-5394; 4310 ± 60BP) from its base and a second date of 3015-2709 cal BC (GU-5393; 4280 ± 50BP) from its upper surface. The second peat exposure, located higher up the beach than the first, produced radiocarbon dates of 2470-1981 cal BC (GU-5392; 3810 ± 80BP) from its base and a date of 2866-2200 cal BC (GU-5396; 3980 ± 100BP) from its surface. These radiocarbon dates confirm that these deposits represent two separate phases of peat formation, both of which began forming around the Late Neolithic, but that the start date for the lower exposure is at least 500 years earlier than that for the upper. Analysis of fossil pollen from both deposits demonstrates the presence of tree and shrub pollen (60% TLPS). In the lower, slightly earlier peat, birch was dominant with smaller amounts of hazel, oak, and traces of elm, pine, alder, ash, holly, lime and willow. Open ground flora was also abundant within both deposits suggesting the presence of dry open ground, such as pasture, in the vicinity. In contrast, plant macrofossils from both deposits, advocate the presence of standing freshwater or wet dune slack conditions, suggested by the presence of aquatics such as stoneworts, waterwort, starwort pondweed, spearwort, marsh pennywort, sedges, rushes and gipsywort (Ratcliffe and Stralker 1996, 118, table 36). The presence of disturbed open ground existing nearby was evidenced from the presence of species such as chickweed, fat hen, parsley, piert and knotgrass. The best evidence from the plant remains for marine influence comes from the upper peat where tasselweed was identified, at plant characteristic of brackish pools exposed to salt spray and periodic inundated (Rieley and Page 1990). Similarly, annual seablite and bittersweet, were present in both samples, species frequently found growing above the strand line on the beaches of Scilly today.

Diatoms were only identified from within the lower intertidal deposit where they contained a wide range of well preserved *taxa*, with high numbers of brackish water species including *Cyclotella meneginiana* (Cameron 1994). Similar environmental conditions were suggested for the formation of the upper peat by the presence of foraminifera such as *Jadammina macrescens* a species typical of lower salt marsh conditions (Cameron 1996).

The presence of marine diatoms in the lower peat suggest that it was subjected to marine influence, at least from time to time, and the presence of tasselweed and foraminiferal in the upper peat confirms that it too was subjected to inundation and salt spray, although the area may have been protected from direct marine influence by dunes. The open woodland suggested by the pollen studies would seem to reflect the nature of drier ground vegetation behind the brackish and freshwater pools and marshy conditions that existed within Porth Mellon. It would seem likely that these deposits were formed in and around wet dune slacks defined by Rieley and Page (1990) as 'the low-lying depressions between dune ridges where the water table does not fall below 1 metre during the year, and flooding often occurs in winter and spring._

The peat deposits taken from Porth Mellon, like those from Crab's Ledge and Par Beach, suggest that when they formed they were located in close proximity to the ancient coastline and not in an open terrestrial environment as previously postulated (Thomas 1985). We may now use the data provided by these environmental studies to construct a model of sea-level changes on Scilly and assess the implications of such a model on the character and configuration of the archipelago during prehistoric.

4.2.4 Producing an independent sea-level curve for Scilly

Ratcliffe and Stralker have produce an altitude curve, using data derived from the analysis of the intertidal deposits as outlined above, to correlate the heights and dates at which these deposits formed (1996, 50, fig. 36). This curve was produced by plotting radiocarbon measurements from the deposits against their altitudes in relation to OD. By drawing a 'best-fit' line through, these points a curve has been produced representing the height at which deposits formed (Fig. 4.11). It can be seen that this line (Line A) intersects with cal AD 2000 at approximately mean high spring tide (MHST) suggesting the deposits formed at around this altitude. Although a degree of variation was present within the analysis of the intertidal peats, overall the formation of these deposits at or around MHST would be in agreement with the results of this analysis.

In order to translate this data to a sea-level curve, I have drawn a second line (Fig. 4.11, Line B) parallel and -2.79 below the first (the difference between MHST and MSL). Line B thus represents an estimation of mean sea-level for the period 5000 cal BC to cal AD 2000. This sea-level curve suggests that previous accounts of Scilly's submergence have over estimated the rate of sea-level change on the islands. It predicts that MSL was: -5.29m O.D. at 5000 cal BC; –3.79m OD at 3000 cal BC; -2.29m OD at 1000 cal BC and -1.79m OD at 0 cal BC/AD; figures broadly comparable with sea-level data recorded elsewhere in south-west Britain (Fig. 4.4) and north-west France (Morzadec-Kerfourn 1998, 438).

The majority of prehistoric sites and material culture from the islands date to between *c.*3000 cal BC to 0 cal BC/AD (Ashbee 1974; Ratcliffe 1986). The sea-level curve illustrated above suggests that during this period sea-level rose at a magnitude of 2m, with the highest normal tide (Mean High Spring Tide) at 3000 cal BC being only -1m below modern Ordnance Datum (Fig. 4.11, Line A). In reconstructing the prehistoric coastline of the islands for this period, such a small divergence is insignificant. Therefore, a common mean sea-level of -3m below OD (approximately mean sea-level for 2000 cal BC) will be used as the basis for analysis throughout this research. By fixing prehistoric MSL at -3m OD it was possible to draw the possible prehistoric configuration of the islands (Fig. 4.12). The decision to produce only one map to characterise the prehistoric Scillonian coastline is based upon the recognition of the dynamic and shape-shifting nature of the islands' coastal environment. This important aspect of the island landscape of Scilly will be discussed below.

4.3 Coastal topography and morphology

The presence of submerged and intertidal prehistoric sites around the inner shoreline of Scilly demonstrates that the landmass of the islands was once larger than today (Appendix 3 contains a list of all recorded submerged and intertidal sites). When these sites are plotted on to a map of the islands, showing MSL at –3m OD (the approximate mean sea-level for cal 2000 BC based upon Ratcliffe and Stralker's submergence curve), the majority fall within this contour although, others located close to prehistoric MSL, would have been vulnerable to inundation by high tides (Fig. 4.13).

The position of prehistoric sites close to MSL may, as suggested by Thomas (1985), result from a much larger landmass once existing. However, the islands' prehistoric coastline is not only determined by changes in sea-level but also through coastal erosion and deposition. The character of this now largely submerged prehistoric coastline can be explored by identifying natural processes operating within this coastal environment. Coastal erosion is caused by the energy of waves and wind working together, with waves and currents mobilising, transporting and depositing sediments. The outer Atlantic coastline of the islands is formed of granite cliffs and steep boulder beaches set within deep water. This coastline is resistant to extensive erosion and would have mostly appeared in prehistory more or less as today. Similarly, islands such as St Agnes and Annet (and to lesser extent

St Mary's) stand in deep water and remain relatively unchanged in coastline since prehistory. In contrast, the islands of Bryher, Samson, St Martin's and Tresco, and in particular the intertidal sandflats that lie between them, may have changed substantially since prehistoric times – these have to be now considered.

The formation of sand flats and dunes

The prevailing wind on Scilly is from the south-west, therefore it can be postulated that erosion of a central and now largely submerged land mass would be initiated from this direction. Erosional episodes of such a land mass would result in its gradual migration in a north-easterly direction, and ultimately in the re-deposition of waterborne sediments to the north and eastern fringes of the archipelago. This pattern of erosion and deposition can be observed in the modern coastal morphology of the islands where extensive sand flats and dunes are restricted to the inner shore line of the northern half of the islands. Good examples of dunes occur at Appletree Banks, Lawrence Bay, Par Beach, Great Bay, St Martin's and Bar Point. These dunes are formed from sand blown inland up from the beach and 'flats' by the prevailing south-westerly wind, building up against the land to considerable depths. Prehistoric sites on Scilly are found engulfed by aeolian sand dunes, such as, the settlements of Nornour and Little Bay (Dudley 1967; Neal 1983). The age of these dunes is uncertain but Lousley (1971: 64) notes that marran grass (*Ammophila arenaria*) was planted along the seaward side of the dunes during the 1830s in an attempt to stabilise and arrest their inland movement. It is also clear that some of these dunes were formed by the first century BC, evidenced by a 'Porth Cressa' cist that constructed within a pit, cut into an already extent sand dune at Toll's Porth (Ashbee 1974, 1999).

Episodes of sanding are directly related to changes in sea-level, the sand being reworked from existing dunes, and the movement inland of dunes with the advancing tide. The origin of this sand could be derived from the formation of a new intertidal zone caused by the gradual flooding of land within the central area of the islands. Barrow (1906) interpreted a submerged sand bar that extends between Bar Point on St Mary's and St Martin Flats to be the last surviving remains of a landmass lost through inundation. Although this bar and the sand flats found along the southern shores of St Martin's and Tresco may represent the remains of ancient migrating sand dunes and coastal barriers, they are first and foremost characteristics of an emergent coastline (Tait and Dipper 1997, 270). An emergent coastline is formed when incoming waves break at a considerable distance from the shore. These weakened waves enter the lagoon and are further impeded by the shallow water and gentle slope of the inner shoreline. Erosion within this environment is minimal but deposition, of material carried by incoming waves, is maximised. This process leads to the formation of ridges and bars of sand and gravel at around mean low spring tide (MLST). These bars once formed may become stabilized and consolidated by plant growth (Tait and Dipper 1997, 270).

The presence of present day intertidal archaeological sites suggests a landmass once existed within the islands' present day central lagoon. This landmass would have been prone to inundation, although the presence of sandbars and storm beaches may have dampened some of the effects of sea-level change. It is probable that this landmass would have been similar to what is known in Cornwall as towans (May and Hanson 2003). Towans are characterised by stabilised dunes, frequently covered by a thin tuft. The formation of extensive intertidal zones and sand dunes on the fringes of such towans provide shelter for vegetation and protection from high tides. The scale of this landmass is impossible to estimate for any given period, as its size would be determined by the presence or absence of sand bars and storm beaches. In such a dynamic environment, the presence of a coastal barrier might allow land below MSL to remain unflooded, allowing for the establishment of terrestrial vegetation and human habitation. In such an environment sea-level change is but one factor that would determine the size and nature of this landmass as the periodic breaching of coastal barriers by storm waves may have caused inundations. Therefore, the size of this dynamic landmass is not solely related chronologically to changes in sea-level but rather to localised and cyclical changes in coastal morphology.

The formation and destruction of coastal barriers

Focusing attention upon sites where intertidal peats, situated within the present day intertidal zone, are found can provide further clues to the nature of this dynamic environment. The extent of marine influence on the formation of these intertidal deposits is varied, probably as result of localised factors such as coastal topography. However, it is clear that by the Neolithic at Porth Mellon and before the Late Iron Age at Crab's Ledge, the formation of these deposits was influenced by periodic marine inundation. One interpretation of this data is that the intertidal peats on Scilly formed within embayed environments similar to those described by Healy (1999) for west Cornwall. Healy has argued that the crenulated coastline of west Cornwall resulted in the development of Holocene embayed environments. Embayments are usually protected from the open sea by sand and gravel barriers hinged to or spanning adjacent headlands, thus creating and preserving embayed fresh water environments (Jennings and Orford 1996; Orford *et al.* 1991).

One interpretation of the environmental data from the intertidal peats on Scilly might suggest that coastal barriers 'dampened the influence of rising sea level within embayed sites, allowing organic rich sediment to accumulate under fresh and brackish water regimes at, or below mean sea level (Fig. 4.14). The periodic increase in maritime influence within the data may be caused by the periodic destabilisation or breaching of protective barriers under the influence of changing relative sea-level, extreme weather conditions, alteration in sediment supply or any combination of these controls. This interpretation is given weight at Par Beach where the presence of mineralogenic clays and silts that separate the three horizons of peat formation within an auger column (Ratcliffe and Stralker 1996, 24, fig. 23.). Alternating sequences of peats and mineralogenic clays and silts suggest periods of terrestrial and salt marsh conditions and episodes of marine transgression (Bell 1997). Comparable intertidal sequences of peats and mineralogenic deposits have been explored by Healy in Cornwall where he argues that these are typical of the periodic formation, destruction and reformation of coastal barriers (Healy 1995, 1999).

The character of the prehistoric coastline

The geology and morphology of the modern coastline of the islands can tell us much about the character of the prehistoric coastline. The character of the coastline is the result of numerous geological processes and variables that provide major challenges to the interpretation of the ancient coast. One important aspect of the coastline that will be explored here is whether the bays and coastal inlets found today were also present during prehistory.

Small bays and inlets occur around the coastline of Scilly (such as Porth Hellick Bay, Old Town Bay, Porth Cressa Bay and St Mary's Pool on St Mary's; Great Porth, Porth Conger, The Cove, Periglis and Porth Killier on St Agnes; Gimble Porth on Tresco; Great Porth on Bryher and Porth Seal and Porth Morran on St Martin's), their presence reflecting variations in rock lithology and structure. The coastline of Scilly comprises of granite headlands separated by cliffs of rab (degrading granitic head). As the rab erodes at a much greater rate than granite, the coastline of the islands takes on a distinctive crenulated form (Trenhaile 1997, 270).

Because of wave refraction (Fig 4.15) the plan shape of this crenulated coastline, may attain an equilibrium state. This state occurs when the resistant rocks on exposed granite headlands are eroded by higher waves at the same rate as weaker rab cliffs are eroded by lower waves in sheltered bays. This means that once a bay is formed through differential coastal erosion this difference is reduced within bays by their limited exposure to the highest and most destructive waves. As a result, the plan shape of bays once they have achieved equilibrium, are maintained through time as the coast slowly retreats landward. This interpretation is significant as it suggests that the shape and character of bays and coastal inlets on Scilly need not be substantially different from how they were in prehistory. The problem with this interpretation for our reconstruction of the ancient coastline is: at what period did these bays reach a state of equilibrium?

I would suggest that the majority of this erosion within bays was accomplished in previous interglacial stages, when sea-level was similar to today's and that only minor modifications of these inherited coastlines was required to attain equilibrium at present sea-level (Trenhaile 1997, 270). This interpretation can be demonstrated at Porth Hellick Bay, St Mary's where a wave cut notch was detected at the base of an enormous tor, (known as the Loaded Camel), located on the north-western side of the bay (Fig. 4.16). This notch, which measures *c.*1-1.5m in depth is located just below MHST and represents a Quaternary coastal feature (Tait and Dipper 1997). The presence of this notch demonstrates that it was formed when sea-levels were comparable (or higher) with today and that the present shape and form of the bay has evolved over a much longer period than previously assumed.

Today the bay contains extensive intertidal sandflats. These flats can be interpreted as a relatively recent geomorphological feature caused by the gradual deposition of silt and sand within the bay (Tait and Dipper 1997, 268). The sheltered nature of the bay has resulted in the formation of a 'lag environment' in which material eroded by wave action is not transported far from its source. Deposition within this environment results in the build up of silt, sand, gravel, and the gradual lowering of sea-level within the bay. In time, the result of this process will be the filling up of the bay with sediment and the establishment of salt marsh.

On the inland side of Porth Hellick Bay, a sand and shingle bar separates the bay from Higher Moors, an area of brackish water pools and marsh (Fig 4.16). This sand and gravel bar can be interpreted as a Quaternary landform that formed when sea levels were higher than today. This landform might have formed within a coastal inlet that stretched from Porth Hellick Bay to Holy Vale (the area now occupied by Higher Moors). This interpretation is partially supported by pollen cores from Higher Moors that indicate that peat here formed upon a white blown sand (Scaife 1984, 35).

At other locations on the islands such as at Old Town Bay, Porth Mellon and Porth Thomas on St Mary's and at Great Pool, Tresco, Big Pool, St Agnes and Great Pool, Bryher sand and shingle bars separate the sea from areas of brackish wetland. At Lower Moors, the discovery of storm beach boulders demonstrates that during the Quaternary coastal inlets were more substantial than those found today in Scilly once existed (Lousley 1971, 13). Similarly, breached fossil sand and shingle bars occur spanning across bays and between headlands and islets at Pernargie, Porth Morran, Great Porth Bryher, and Little Ganilly.

Based upon available archaeological and geomorphological data Fig. 4.12 represents an attempt to provide a representation of the prehistoric configuration of the islands. This is of course only one of many possible interpretations. It should be recognised that such uncertainty is a fundamental characteristic of this dynamic island landscape were storms can overnight cause the destruction or formation of coastal features, such as storm beaches, altering the character and extent of the intertidal zone. The island landscape that emerges from this analysis is dynamic and shape shifting. Whilst uncertainty remains over the precise configuration of the prehistoric coastline, a number of restrictions can be identified that might restrict this dynamic environment and thus justify the island configuration illustrated in Fig 4.12. These include:

- The analysis of intertidal peat deposits from Scilly suggests that prehistoric sea-level change was substantially less than postulated by Thomas (1985). The rate of sea-level change identified from the analysis these intertidal deposits is comparable to sea-level curves produced from else where in south-west Britain and north-west Europe (Healy 1995; Heyworth and Kidson 1982; Morzadec-Kerfourn 1998; Selwood *et al* 1999).
- That little erosion has taken place along the outer Atlantic coastline of the archipelago, which is comprised of granite cliffs set in deep water. Where erosion has occurred along this outer coastline it has been restricted to coastal inlets and bays, characterised by cliffs of degraded granite (rab). In these bays the majority of coastal erosion occurred during the Quaternary with subsequent erosion not significantly altered the plan shape of the coastline.
- Erosion within the central lagoon of the islands is primarily from the south-west; instigated by the prevailing south-westerly wind and subsequent resulting wave regimes. This pattern of erosion can be detected in the island landscape by the presence of extensive sand flats and dunes along the northern and eastern inner shoreline of the archipelago.

The significance of this data for our interpretation of the prehistoric island landscape of Scilly is that although coastal erosion has taken place around the coastline of the islands' the overall shape and configuration of the islands during prehistory need not be substantially different to that illustrated in Fig 4.12.

4.4 The Prehistoric bio-environment of Scilly

We will now build upon our understanding of the dynamic nature of Scilly (as detailed above) by considering other forms of environmental data. Botanical (fossil pollen and plant remains) and faunal (animal bones and shells) data will be used to suggest the types of habitats present within the island landscape, the use of such habitats and changes in plant and animal exploitation through prehistory.

4.4.1 Botanical evidence

Pollen studies

The study of the past vegetation and land use patterns of Scilly are provided by pollen studies carried out between 1965 and 1996. Such investigations have concentrated on the analysis of palaeosols buried by blown sand. These studies reflect local vegetation and environmental changes of the area adjacent to the sample point (Dimbleby 1977; Dimbleby, Greig, Keeley and Scaife 1981; Greig and Keeley 1978). Scaife's (1983, 1984) analysis of peat accumulations at Higher and Lower Moors provides a longer record of vegetational change partially fixed by radiocarbon dating. The establishment of the Higher Moors sequence has enabled correlations to be drawn between this and other individual samples (Fig. 4.17). Pollen data drawn from the intertidal peats has already been discussed and will not be considered further.

Higher Moors, St Mary's

Higher Moors is a topogenous mire that extends inland from Porth Hellick Bay (SV 925 107) to Holy Vale (SV 921 115). Scaife (1984) identified five vegetational zones at Higher Moors (Fig.4.17). The earliest (HM:1) marks the beginning of peat formation. It indicates oak dominated woodland with an under storey of hazel, elm, ash, and birch. A sample taken from the base of the peat in HM:1 produced a date range of 5480-5060 cal BC (HAR-3695, 6330±100 BP), placing the beginning of HM:1 in the Mesolithic. This accords well with evidence from elsewhere in Southern Britain for a climax deciduous forest at this time. It may also support Scaife's suggestion that the high percentage of birch in this phase could represent scrub regeneration resulting from anthropogenic disturbance by Mesolithic gatherer-hunters (Scaife 1984b: 39).

The second zone (HM:2) is characterised by a notable decrease in tree pollen and the introduction of cultigens (including cereal pollen, ruderals and agricultural weeds). Scaife (1984) suggests that this change represents the clearance of woodland for cultivation. The dating of this pollen zone produced a date range of 1520-1170 cal BC (HAR-3694, 3100 ± 70BP). On first consideration this dates seems to be too young given that the pollen reflects the first impact of forest clearance for agriculture that would (especially as it indicates a decline in elm pollen) be placed in the Neolithic elsewhere in Britain. However, the radiocarbon sample was taken from the upper half of HM2 and it is possible, that the beginning of this pollen zone dates to the Neolithic.

In contrast, the vegetative phase (HM:3) is marked by the regeneration of woodland when birch became more abundant than before, oak also occurred but hazel became less common. The continued presence of cereal and herbaceous pollen indicates that some land remained open. The forest regeneration reflected in HM:3 is an occurrence seen in Late Neolithic pollen spectra of southern Britain, and Scaife suggests that this phase could be Late Neolithic or Early Bronze Age (Scaife 1984: 39-40). The beginning of the fourth vegetational phase (HM:4) was represented by a marked decline in tree and shrub pollen, after which herbaceous flora predominated, indicating an open and pastoral landscape. The uppermost vegetational zone (HM: 5) reflected changes that had taken place over the last 150 years. The top two radiocarbon samples represent the transition from HM:3 to HM:4 (when extensive clearance of the secondary forest began). They provide calibrated date ranges of 840-400 cal BC (HAR-3724, 2540+/-80) and 770-250 cal BC (HAR-3723, 2360 +/- 70 BP). Scaife (1984b: 40) had postulated an Early Bronze Age date for the transition from HM:3 to HM:4 (and LM:1 to LM:2, see below) on the basis that most of the prehistoric monuments on Scilly appear to have been constructed during this period. However, it now seems likely that this clearance episode was related to Late Bronze Age or Early Iron Age anthropogenic activity.

Lower Moors, St Mary's

In the absence of radiocarbon dates from Lower Moors, Scaife (1984b) has correlated the vegetation phases identified with the dated pollen zones from Higher Moors His analysis suggests that the pollen sequence at Lower Moors did not begin as early as that at Higher

Moors. The first pollen zone at Lower Moors (LM:1) appears to correspond with HM:3. Birch oak and hazel were present, with lesser quantities of alder. Agricultural activity is indicated by the presence of cereal pollen, albeit in small amounts, but of greater significance were the relatively high values of *Graminae* and *Cyperaceae* suggesting a grassland environment and possibly a pastoral economy. Scaife suggests that the second and third zones (LM:2 and LM: 3) are equivalent to HM:4, the post-deforestation period at Higher Moors. In LM:2 the presence of cereal pollen and possibly weeds of arable land, attest to some localised arable agriculture in the vicinity of Lower Moors. The paucity of tree and shrub vegetation during the next vegetational phase (LM: 3) is emphasised by the predominance of herbaceous vegetation communities. As at Higher Moors, the upper zone at Lower Moors (LM: 4) represents the last 150 years.

Other pollen studies

Other pollen studies carried out on Scilly at Innisidgen, (Dimbleby 1977) Nornour (Greig and Keeley 1978), and Halangy Porth support the vegetational history suggested at Higher and Lower Moors, of deciduous forest, which by the Iron Age had become largely transformed into an open environment of cultivated fields, pasture and heathland (Fig.4.17). At Innisidgen, a forest dominated by oak and hazel was cleared for arable farming and grazing before being inundated by blown sand (Dimbleby 1977). At Nornour the lowest section of the pollen profile, which appeared to be contemporary with the occupation of the excavated (Bronze Age to Iron Age) settlement, reflected a mixed landscape of grassland, cultivated land and some woodland (consisting of alder, oak, some birch, hazel and perhaps traces of elm) in the general vicinity (Greig and Keeley 1978). It has been suggested that the lowest pollen samples taken from a buried soil profile at Halangy Porth might be contemporary with an Iron Age settlement on Halangy Down (Dimbleby, Greig and Scaife 1981). If this were the case, it would appear that this settlement was located in a treeless environment (Dimbleby, Greig and Scaife 1981). Similarly, pollen samples taken from a ditch running alongside an Iron Age field boundary at Bar Point also indicate an open environment, with no trees or shrubs (Evans 1984, 20).

The pollen studies outlined above provide a background to changes in the prehistoric environment of Scilly and suggest the presence of particular prehistoric habitats such as:

woodland, heathland and farmland. The identification of these ancient habitats will now be explored through further examination of ancient pollen and plant macro-fossils. The purpose of this exercise is firstly, to identify evidence for prehistoric habitats and secondly, to explore the distribution and extent of such habitats within the prehistoric landscape. The identification of these prehistoric habitats will be used in subsequent chapters of this thesis to assess the landscape context of prehistoric settlement and monuments.

Prehistoric woodland

The presence of prehistoric woodland, is demonstrated for Scilly by pollen samples from Higher Moors (Scaife 1984), Innisidgen (Dimbleby 1977), Lower Moors (Scaife 1984), Nornour (Greig and Keeley 1978), Par Beach (Ratcliffe and Stralker 1996) and Porth Mellon (Ratcliffe and Stralker 1996), however, the character and extent of this woodland is unclear Fig.4.17). Pollen recovered from both Higher and Lower Moors suggests the presence of woodland but this most likely relates to localised growth around the margins of these wetland areas. The cycle of deforestation and re-growth demonstrated in the pollen analysis from these sites has been linked to human intervention and the adoption of agriculture. A second interpretation of this data could argue that the demise and regeneration of woodland at Higher and Lower Moors may also have been as result of inundation and fluctuations in salinity caused by the periodic formation and destruction of coastal sand and gravel bars. As argued earlier the dynamic lifecycle of coastal bars has played a major role in defining the nature of the island landscape.

Substantial trees can survive on Scilly but only in sheltered and managed conditions as demonstrated today in the exotic gardens of Tresco (King 1991). Dimbleby *et al.* (1981) suggests that prehistoric woodland on the islands would have comprised (like certain surviving patches of ancient woodland in West Cornwall [Thomas 1985: 74,fig. 25]) of wind-stunted oak scrubland (*Quernus robur*), with an under-storey of smaller trees, mainly alder (*Alnus*), and with a floor and margin of appropriate flowering plants.

In topographical terms the best that can be done in recreating the extent of such woodland is to isolate locations where such woodland would be unlikely to have grown. Such locations on Scilly included exposed south-west facing locations. Equally, unsuitable conditions would have been within what is now the central marine and intertidal area of the islands, where periodic inundation would have occurred. The focus of this woodland would have lay in the sheltered eastern half of the islands in valleys and in areas sheltered from prevailing winds An attempt to show the likely distribution of woodland on Scilly is shown in Fig.4.18.

Prehistoric heathland

Pollen records from Scilly contain only low quantities of heathland vegetation but this under-representation is likely to result from the low pollen output of heathland species rather than from their absence in the island landscape (Ratcliffe and Stralker 1996:33). Pollen samples taken from below the rampart of an Iron Age cliff-castle on Shipman Head demonstrate similar vegetation to those experienced today dominated by heathland and open ground coastal species such as buck's horn plantain (*Plantago coronopus*), thrift (*Armeria*) and heather (*Calluna*) (Ratcliffe and Stralker 1996, 92).

Prehistoric heathland is also demonstrated from the identification of plant macro-fossils from within the hearths and middens of prehistoric houses. Charcoal and charred plant remains, of gorse and heather, has been recovered from a number of prehistoric houses on Scilly that chronologically span both second and first millennium BC. Radiocarbon determinations derived from prehistoric heathland vegetation have produced dates of: Porth Killier (1369-942 cal BC OxA-4700; 2935 ± 55BP) Bonfire Carn (1111-812 cal BC OxA-5290; 2755 ± 65BP), West Porth (831-414 cal BC OxA-3651; 2570 ± 65 BP) and Halangy Porth (760-385 cal BC OxA-4697; 2390 ± 50BP). Further examples of prehistoric heathland vegetation has been identified from second and first millennium BC contexts (i.e. hearths and middens) at the settlements of Nornour and Little Bay (Butcher 1976; Neal 1983).

The identification of heathland plants (particularly gorse) from the hearths of prehistoric houses provides evidence for the presence of areas of heathland on Scilly and for the exploitation of these areas for household fuel. Gorze (known locally as furze) was used as fuel in Scilly and West Penwith, up until the end of the 19th century, and harvested annually in October (Symons 1992).

The absence of sustainable woodland on Scilly (as shown above) and the use of gorse and heather as fuel suggests that substantial areas of heathland may have existed during prehistory. It is not possible to reconstruct the distribution of this ancient heathland with accuracy but we might assume that it may have been similar to that of today. Heather and gorse form an important part of the present day heathland vegetation of the islands, characterised by acidic podzol type soils (Dimbleby 1967). Such heathland occurs on Scilly on land above the contemporary 30m contours, on headlands such as Shipman Down, Bryher, Wingletang Down, St Agnes, Castle Down, Tresco and Chapel Down St Martin's, where they are exposed to wind and salt spray. An attempt to show the likely prehistoric distribution of heathland on Scilly is shown in Fig.4.18.

Prehistoric farmland

The identification of pollen from cereals and agricultural weeds at Bar Point and Higher, and Lower Moors suggests arable farming (Evans 1984; Scaife 1984). Cultivation and crop processing is also suggested by the survival of an Early Iron Age lynchetted field systems on Halangy Down (Ashbee 1999), the discovery of plough marks within a Later Iron Age fieldsystem at Bar Point (Evans 1984, 23, fig 12) and the numerous saddle querns found within both second and first millennium BC settlements.

At Porth Cressa Bay and West Porth, barley has been found within prehistoric houses that have produced respective, Middle and Late Bronze Age dates of: 1524-1316 cal BC (OxA-4701; 3165 ± 55BP) and 826-410 cal BC (OxA-3650; 2545 ± 65BP). A cache of burnt naked six-row barley was found at East Porth, Samson upon an ancient land surface exposed in a cliff-section (Ratcliffe and Stralker 1996, 61-62). The absence of chaff from within this cache suggests that it was already processed and cleaned before its deposition. The cache was not associated with any obvious archaeological feature although it may have been placed within a cut feature now obscured by podzolization. The intentional deposition of a cache of cleaned and charred barley, (possibly within a pit) suggests that it may represent either, storage or votive deposit. This cache produced a Early Bronze Age date of 2197-1769 cal BC (OxA-3649; 3620 ± 70 BP).

Another crop grown on the islands was horse (Celtic) bean. This crop has been identified at three sites on Scilly, where it occurs from the Middle Bronze Age until the Middle Iron Age (Murphy 1983; Ratcliffe 1990; Ratcliffe and Stralker 1996). These sites and their associated dates include: Halangy Porth, 400-174 cal BC (OxA-4696; 2250 ± 50BP), Porth Cressa 1524-1316 cal BC (OxA-4701; 3165 ± 55BP) and West Porth 826-410 cal BC (OxA-3650 2545 ± 65BP).

Further evidence of cultivation is suggested by assemblages of agricultural weeds such as vetches, knotgrass, black bindweed, chickweed, nettle and red goosefoot (Ratcliffe and Stralker 1996, 11). One or two of these plants have specific habitat requirements that provide additional information on soil conditions; corn spurrey is characteristic of acid soils such as those that would have developed over the granite or after woodland clearance, though ploughman's spikenard is typical of calcareous soils. The addition, either intentionally or accidentally of shell sand would have created suitable conditions for calcareous plants. Pollen samples taken from the coastal cliff-face at Halangy Porth (in close proximity to the Early Iron Age settlements of Halangy Porth and Halangy Down) has also produced interesting information concerning cultivation practices (Ashbee1983a; 1999). The lower levels of this pollen profile (that through analogy with the dated pollen sequences from Higher Moors, relate to the mid first century BC) contained significant amounts of *Cruciferae* (of a type closely resembling sea rocket), which led to the suggestion that either a flowering crop was being grown as a green manure or that local coastal vegetation was being brought onto the fields for the same reason (Dimbleby, Greig and Scaife 1981, 140).

It is unclear as to the scale of arable farming on Scilly and it would be wrong to place too much emphasis upon reliance upon arable crops within the daily subsistence of prehistoric Scillonians. What this data suggests is that limited farming or horticulture was being practiced on Scilly from the middle 2nd millennium BC. Areas of prehistoric farmland would not have been found within areas exposed to the wind or within areas prone to inundation. In order to avoid exposure to wind crops are most likely to have been grown at the lowest possible altitude or upon the leeward side of hills. Such areas may include: the area around Bar Point (associated with a Late Iron Age field system containing plough marks) and areas along the inner coastlines of Bryher, Samson, St Martin's and Tresco. Whilst the distribution of farmland, outlined above, provides one possible scenario it is perhaps more likely that crops were grown in small garden plots within sheltered locations throughout the islands (such as within clearings in woodland or closely associated with settlement). Because of the uncertainty in mapping the distribution of prehistoric Scillonian farmland, no attempt has been made to show its distribution in Fig.4.18.

4.4.2 Animal remains

Bones are unusually poorly preserved on Scilly due to the acidity of the soil, yet despite this an impressive archaeozoological record exists (Thomas 1985, Ratcliffe and Stralker 1996). In this section, I will explore animal remains derived from archaeological contexts on Scilly, that date predominantly from the first and second millennium BC, these include the remains of: mammals, birds, fish, molluscs and crustaceans. This record holds the potential of providing information on the past island environment and prehistoric subsistence, including seasonality and methods of hunting and animal husbandry. Equally, the island habitats identified for Scilly (in the previous section), from palaeo-botanic remains, can be extended and clarified through a study of prehistoric animal remains. Animal remains from prehistoric deposits will be used to identify species of mammals, and birds specific to particular habitats. The bones of fish and sea mammals and the shells of molluscs will be used to identify maritime habitats such as the intertidal zone and inshore and offshore waters. Through the identification of the exploitation of marine habitats, subsequent chapters will be able to discuss themes such as movement on the sea and the technologies of fishing and hunting.

Unfortunately, as the record currently stands its usefulness is seriously limited due to the absence of detailed analysis. The majority of prehistoric animal remains come from middens. Where middens have been discovered, excavation has been limited and lack detailed contextual records (Turk 1967, 1971, 1978a 1984a). A further problem is that a large proportion of the animal bones found remain unidentified. For example, at the Bronze Age settlement of Little Bay 49.1% of mammal bones, 20.6 % of fish bones and 0.8% of bird bones are not attributable to species (Neal 1983). As such, although records suggest a broad range of wild and domestic species, poor species identification may mask even greater diversity. Because of poor chronological resolution, analysis of animal bone assemblages from Scilly will be organised into two periods, the first representing the second millennium BC and the second representing the first millennium BC. Where particular species have been noted to be particularly prevalent, this will be noted in the text. Figures (4.19-4.25) illustrate at which sites individual species have been identified.

Mammals

Domestic species found on Scilly during prehistory include: cattle, horse, sheep, goat, and pig. These domestics even if reared on Scilly must originally have been transported by boat from the mainland a situation paralleled in the Outer Hebrides where stock was introduced at the time of the islands' Neolithic colonisation (Serjenantson 1990). Boats would have been used on Scilly for the routine movement of stock between islands as well as to carry them beyond the islands as part of wider trade and exchange networks. On Scilly, small rowing boats and gigs were in use up until the middle of the 20th century for the transportation of animals (Hudston 2000, 15).

Ox bones have been identified in virtually all bone assemblages. Where estimates of stature can be made, Turk suggests that most were small animals (1972). As in Cornwall, small black cattle, fed on seaweed were common in Scilly until the early 19th century (Borlase 1756; Heath 1750; 46; Maybee 1883; Troutbeck 1796, 12; Woodley 1822, 78;). A calf's tooth found at Par Beach, St Martin's, was imbedded within an intertidal peat deposit. This deposit produced a date of between 4220-3955 cal BC (GU-5061; 5210 ± 50BP). It is likely however that this tooth became incorporated within an already formed deposit and that this early date relates to the deposits formation and not to the inclusion of the tooth.

The bones of a small species of horse has have been found at Dial Rocks, Halangy Porth, Nornour and Porth Killier. At Porth Killier a horse's humerus was found in a midden associated with a radiocarbon date of 1600 – 1265 cal BC (OxA-3648 3170 ± 65), whilst at other sites bones are associated with Iron Age and Romano-British pottery (Turk 1978, 100; 1991, 105).

The majority of ovicaprid bones, that can be identified, are sheep. Turk has described these as a predominantly short legged 'Turbury'type species similar to those found on Scilly until the mid 19th century – small, black and fed on seaweed and snails (Turk 1971, 81; 1978, 99). At Nornour, Turk has identified evidence for a second much larger four-horned breed probably similar to the Manx 'loghan' sheep (Turk 1968, 76; 1971, 81; 1978, 99-100). Goats have only been positively identified at Nornour, where they appear to have been a small unimproved breed of scrub goat, possibly semi-feral' (Turk 1968, 76; 1971, 81; 1978, 100). As well as being scarce goats appear to have been a late introduction to the islands, first appearing in the late 1st millennium BC (Turk 1971, 81). Both sheep and goats on Scilly would most likely have been allowed to graze freely on the islands or transported to summer grazing on some of the smaller uninhabited islands.

Pig bones identified from assemblages are indistinguishable from wild swine suggesting that they were from a small, semi-feral breed (Turk 1968, 77; 1971, 83; 1978, 100; 1984, 69-70). These pigs like similar varieties found in Scotland would have been left to forage on heaths and scavenge for shellfish and other food on the seashore. At Nornour pigs have been identified with unusually large feet, a characteristic that may indicate a population adapted to the salt marsh conditions of the intertidal zone (Turk 1978, 100).

The bones of red and roe deer occur at five prehistoric sites on Scilly (Fig 4.19). The majority of bones identified are from red deer but roe deer are also present (Turk 1971,1978). At Porth Killier red deer bones are associated with a midden that has produced radiocarbon dates of 1682-1320 cal BC (OxA-3647; 3220 ± 70BP) and 1600-1265 cal BC (OxA 3648; 3170 ± 65BP), whilst on St Mary's deer bones are found within midden deposits at the Iron Age settlement of Halangy Porth. Red deer bones comprise of both adults and juveniles a point that led Turk to suggest that Scilly once had a resident ancient red deer population (Turk 1960, 1968, 1978). This interpretation was based upon the assumption that the landmass of Scilly during prehistory was substantially larger than that of today and that a glacial land bridge once existed between the islands and the mainland. However, geologists have not demonstrated that a land bridge ever existed (Selwood *et al* 1999) and as argued previously, the prehistoric landmass of the islands is much smaller than previously assumed. Furthermore, it would seem unlikely that the islands have ever been extensive and wooded enough to support such a population of deer (Chaplin 1975; Pernetta and Handford 1970, 536). The presence of deer bones suggests that deer were imported from the mainland as either live animals (kept as a semi wild managed herd) or as venison.

The exploitation of sea mammals is indicated by the presence of seal, dolphin, porpoise and whale bones (Fig. 4.19). The bones of grey seals have been recorded on Scilly at almost every site investigated and are particular prevalent at the settlements of Nornour and Porth Killier (Grey 1972; Ratcliffe and Stralker 1996; Turk 1978). Seals would have been hunted upon the rocky shores of offshore islands and islets, such as the Eastern Isles and Northern and Western Rocks, were large colonies are still found today. Hunting would have been carried out either from boats or on foot. Both adults and juveniles are found which in almost all cases lack facial and anterior cranial bones suggesting slaughter by blows to the forehead (Turk 1971, 81-6, 1978, 100). Turk has noted that the majority of the bones from the upper body show evidence of burning and has attributed this to the practice of melting down blubber from the back of the neck and shoulders to produce oil (*ibid.*).

The remains of other sea mammals, such as dolphin, porpoise and whale, are more sporadically found and it has been suggested that these represents the periodic exploitation of strandlings. However, it is possible that these marine mammals were intentional beached by driving them into the shallow inshore water between the islands where they would become stranded by the outgoing tide. Similar hunting methods are documented on the west coast of Ireland to catch basking sharks (Jackson 1932).

This data suggests a mixed land and sea based economy was practised on Scilly, during the second and first millennium BC, based upon a wide variety of terrestrial and marine mammals.

Birds

A list of bird species identified is shown in figures 4.20 and 4.21. Resident, migratory and vagrant species are recorded, demonstrating that birds were caught throughout the year. Birds would have provided meat (preserved by salting, smoking and drying) as well as a source of oil, eggs and feathers.

As would be expected sea birds predominate the record. The most common species present are razorbills, gannets, guillemots and shearwaters all of which provide substantial quantities of oil that can be used both as food or burnt as fuel (Turk 1967, 263; 1971, 86-87). Razorbills and shearwaters are pelagic, only approaching shore under the cover of night during their breeding season (April and July) when they nest in rocky cliffs and in stable boulder beaches. These birds would have been caught as they left or returned to their nests with either hand held or fixed nets erected nets adjacent to their nesting grounds. Parallels for the use of handheld nets are recorded in the Faeroe Isles and Iceland where they are used to catch puffins (Gaffin 1997, 46). The use of fixed nets is suggested by the presence of small birds, such as wrens and sparrows (of limited food value) within prehistoric middens indicating that they were indiscriminately trapped in nets. Cormorants are also found within middens but provide limited quantities of oil and only meagre amounts of meat. Turk suggests that cormorants with ringed gullets, to prevent them from swallowing may have been trained for fishing as they were in Cornwall during the 18th century (Turk 1971).

An unusual find is the occurrence of the great auk, a large flightless bird that became extinct in Britain around 1844 (Ratcliffe and Stralker 1996, 43). Scilly is not recorded as one of its breeding sites and the presence of the remains of a single bird, from a midden on Halangy Down, may result from an occasional ocean-borne visitor or as a traded item. Similarly, the presence of the remains of white stork is unusual as this bird is not associated with Britain, being more at home in southern and eastern Europe. The presence of this species on Scilly is likely to have resulted from an individual blown off course during annual migration.

The presence of sand flats and salt marsh within the prehistoric island landscape is confirmed by the abundance of intertidal species such as the Brent goose. Similarly, confirmation of areas of prehistoric wetland is confirmed by species such as swan, heron, bittern and teal, all of which are well represented in bone assemblages. These species confirm the existence of salt marsh and brackish water pools. The hunting of birds within wetland environments would have necessitated the use of nets or projectiles. The use of projectiles to hunt waterfowl and game birds within inland pools and marshes such as at the Great Pool, Tresco, is given weight by the high incidence of flint scatters found within these locations (Ratcliffe and Thorpe 1991, 29, 39).

Birds such as skylarks, corncrake and lapwing suggest the presence of open heathland and farmland. The presence of grouse and pheasant, suggests the presence of arable and open pasture. Both species only range between one or two kilometres during their lives and their presence on Scilly demonstrates that both were introduced onto the islands. Records of grouse and partridge are found within first millennium contexts and this may tentatively suggest an increase in farming during this period perhaps corresponding to the laying out of field systems.

Woodland species such as blackbird, thrush, spotted flycatcher and woodcock are least represented. The presence of woodland species indicates the presence of at least limited tree cover on the island but as these species are highly adaptable they cannot be used to differentiate between developed woodland and wind-stunted scrub.

The above analysis tells us that birds played an important part in prehistoric island subsistence and were exploited throughout the year. Significantly, these bird remains confirm the presence of specific habitats (e.g. woodland, wetland, farmland, and intertidal sandflats), thus providing a more detailed understanding of the nature of the island landscape into which prehistoric settlements and monuments were constructed.

Fish

Fish bones have been recovered in substantial quantities and represent both inshore and offshore species (Fig. 4.23 and 4.24). The fish suggest all year round fishing with both migratory and resident species presented. Resident species such as conger eel and wrasse represent the largest portion of bone assemblages supplemented by both summer and winter migratory species such as ling, bass, cod, John Dory and mackerel. Scilly is ideally suited for both inshore and offshore fishing as it stands at both the southern and northern limit of the migratory range of various fish species (MAFF 1981).

Fishing methods on the islands must have been sophisticated as conger eels in excess of 3m; ling of 2m and a large species of *elasmobranch* (shark or ray) were recorded from second millennium BC midden deposits from Nornour (Turk 1971, 88). Fishing methods may have included spearing, trapping (wrasse and crab pots), line and hook fishing, and fishing with scoop baskets and nets made from natural fibre or sinew (Morton Nance 1963). During the second and first millennium BC, fishing weirs might have been constructed across tidal channels or between small off shore islands and the mainland. Preservation of fish was probably by wind drying, smoking and salting (Wilson 1973, 19-20). As well as providing a reliable food source many of the fish, such as cod and saithe, caught are particularly rich in oils.

Inshore fishing

In shore fish, such as bass, conger eel, mullet, turbot and wrasse, are the most commonly occurring species and would most likely have been caught on lines from the coastline and in fishing weirs constructed within the islands' inner lagoon. The construction of stone weirs would have enabled these shallow water fish to become trapped by the outgoing tide. Catches within fishing weirs would have been substantially increased by laying down ground bait such as shellfish. As the tide began to go out, fish trapped within the weir would be attracted to rocky crevices between boulder walls, and to banks of seaweed. These entrapped fish could be collected by hand, with scoop nets or with fishing spears. The use of fishing weirs is supported by the absence of shoaling fish, such as herring scad, (prolific today within the shallow water of the inner lagoon). These fish are restless swimmers and would have been caught in large numbers if nets were set in the intertidal zone but would be unlikely to stay within a fishing weir and wait while the tide ran out.

The possibility of the presence of prehistoric fishing weirs within the intertidal zone of Scilly calls for the reconsideration of the intertidal boulder walls on Samson Flats (Crawford 1927, 1947; Goodwin 1946; Piggott 1954). These walls have traditionally been interpreted as land enclosure but in light of the new submergence data their interpretation as fishing weirs should be considered. The construction of fishing weirs does not necessarily involve the construction of obvious cultural features, such as walls, as the modification of natural boulders within the intertidal zone to create or enhance shallow pools would equally be effective. An example of such a naturally formed fishing pool is the 'Pilchard Pool' within Porth Cressa Bay. Fish bone assemblages from Little Bay, May's Hill, Nornour and Porth Killer (Neal 1983; Ratcliffe and Stralker 1996; Turk 1967, 1971, 1978a, 1984b) suggest that inshore fishing was practices extensively through both the second and first millennium BC.

Offshore fishing

The majority of the remaining fish could be caught from the headlands and cliffs of the Atlantic coastline (although it is more likely that they were caught from boats), whilst, offshore fish such as pollack, saithe, and cod, confirm that deep waters beyond the islands were visited. In such locations, fish would have been caught using long lines. Fishing from both the shoreline and from boats would most likely have taken place at night and during high spring tides.

Throughout both the second and first millennium BC, fish bone evidence from the islands demonstrates that line fishing was used to catch deep-sea fishes. Wooden hooks, made from suitably shaped twigs and thorns or compound hooks made from wood, bone and shell have a long history throughout the world and may also have been used on Scilly, although none to date have been identified.

The absence of fishing hooks poses the question the how these deep-sea fish were caught. One possibility is suggested by Turk (1984, 69) who noted that a sizable proportion of bone and antler found within second and first millennium BC houses and middens showed signs of deliberate modification. He noted that the majority of long bones were broken in the same way, split longitudinally and then cut down one side, to make a rough awl-shaped blade. Turk argues that this pattern of breakage is not consistent with the extraction of bone marrow (which is observed elsewhere in bone assemblages). He suggested that this pattern of deliberately worked bone rather than representing artefacts in themselves may be wasters from a process designed to produce something else, not yet identified. Turk notes that although the bones of a variety of mammals were treated in this way those of deer were particularly common, suggesting that the qualities of deer bones were particularly sought after.

One possible interpretation of this evidence is that the artefacts being produced are gorges, a simple type of fishing hook, recognised as being the prototype to the bent hook (Clark 1965; Hurum 1977). A gorge comprises of a small piece of bone wood or metal that is straight and slightly pointed at one or both ends. The gorge is tied at its middle to a fishing line and inserted lengthways into a piece of bait. The fish readily swallows the bait containing the gorge, but when it swims away or the line is pulled the gorge takes up a transverse position in the fishes throat or belly so that it cannot spit it out.

Using this simple technology, prehistoric islanders would have been able to fish within the offshore waters of the archipelagos for the larger species of deep sea fish such as cod, pollock and saithe.

The identification of inshore and offshore species of fish demonstrates that prehistoric Scillonians were making journeys within the inshore and offshore waters of the archipelago. It also confirms that the sea played a major role in prehistoric subsistence and that prehistoric Scillonians possessed the maritime technology and skill to fish for large fish, such as cod and saithe, at considerable depths. The implication of this for my research is that we can now talk with confidence of prehistoric islanders making journeys around the islands seascapes.

Marine molluscs and crustaceans

Extensive prehistoric shell middens are found throughout the archipelago. Where these middens have been dated, such as at Porth Killier, Porth Cressa, Dolphin Town, Nornour and May's Hill they have been shown to span both second and first millenniums BC. It is likely that other shell middens where no analysis has been carried out hold the potential of dating to the fourth and third millennium BC, such as at Carn Windlass on Annet, where large shell midden was been shown to contain Early Neolithic pottery (Isles of Scilly Museum register no.910) It is frustrating that so few middens have been analysed as such work might reveal evidence for early activity on the islands, currently underrepresented in the data. Their detailed analysis could provide not only information on the human exploitation of coastal resources but may help to identify evidence of environmental changes.

Species of marine molluscs identified from prehistoric sites on Scilly come from a variety of coastal habitats such as exposed rocky coastlines (e.g. *Patella vulgata* and *monodonata lineata*) shallow coastal waters (*mytilus edulis*) and deep offshore waters (*Pecten maximus*) (Fig.4.24 and 4.25).

Limpets (*patella)* are the most commonly occurring mollusc identified and are found on almost every second and first millennium BC settlement investigated on Scilly. Turk suggests that limpets were primarily used for ground bait in fishing traps and as line bait for coastal and offshore fishing (1984. 76-77). Ethnographic evidence for the use of limpets in line fishing comes from Orkney and Shetland Islands (Fenton 1978, 558). The use of limpets as a food resource cannot be discounted as within living memory limpets have been eaten on Scilly and elsewhere in Britain (Gray 1972; James 1984). Only one attempt has been made to determine the importance of limpets as a source of protein however, the results of this study proved inconclusive (Townsend 1967).

The presence of molluscs tolerant of low levels of salinity, such as purple topshell (*Gibbula umbilicalis*) and flat periwinkle (*littorina littorea)*, may tentatively support the presence of an extensive intertidal zone and the formation of substantial areas of brackish water and salt marsh in what is now the inner lagoon of the islands. The most unusual mollusc present within prehistoric Scillonian assemblages is the Great scallop (*Pecten maximus*) that occurs within offshore waters at depths of 100m. This mollusc has been found within a first millennium BC midden at Nornour (Evans 1978, 103). Scallops today are collected commercially by divers or dredged up in trawl nets. Although it is feasible that prehistoric Scillonians dived for great scallops it is more likely that the few examples identified represent dead molluscs dislodged from the seabed and washed onto the shores of the islands. The only crustacean identified on Scilly is the edible crab (*cancer pagurus*) and this only from Nornour (Turk 1978, 103)

The study of molluscs on Scilly confirms the character, previously advanced through the analysis of present day intertidal peat deposits, that the ancient coastline comprised of particular ecological zones, such as: saltmarsh, sand sheltered and rocky exposed coastlines. Equally, the prevalence of limpets from prehistoric midden might suggest the importance of theses molluscs as fishing bait and the economic importance of maritime resources.

4.5 Conclusion: the active creation of a dynamic environment

This chapter has sought to provide a picture of how the islands' may have appeared during prehistory. In particular, it has argued that previous accounts of sea-level change on the islands have over estimated the rate and extent of inundation. It has shown that sea-level is only one factor that needs to be considered as the coastal topography and morphology equally play a part in defining the ancient coastline. By mapping the active processes involved within this island landscape, it has been possible to produce a map of the potential landmass of the islands during prehistory. This map will form the basis of analysis in subsequent chapters. The reanalysis of prehistoric botanical and faunal remains compliment this interpretation allowing us to identify terrestrial and marine habitat zones, such as: intertidal flats, saltmarsh, woodland, heathland, wetland, farmland, offshore and inshore waters. The identification of habitat zones will be used in subsequent chapters to provide an environmental context for the landscape settings of prehistoric monuments and settlements. Equally, through the identification of offshore and inshore fish species we can identify sea zones.

The prehistoric island landscape of Scilly was always in a state of flux and it is acknowledged that the model presented within this chapter is only one of many possible interpretations of the data. The model presented represents a first attempt at reappraising

Thomas' earlier model. This new model is flexible enough to be developed as and when new data comes to light and as such forms the basis of a much broader research agenda than presented in this thesis.

Before we move on to explore evidence for the prehistoric occupation of Scilly, we must first explore the chronology for Scillonian prehistory. This will be the subject of the next chapter where I will outline the first chronological framework for Scillonian prehistory based upon the reanalysis of key excavations and material culture.

5: CREATING A CHRONOLOGICAL FRAMEWORK FOR SCILLONIAN PREHISTORY

This chapter is in three sections. The first section argues that Scillonian prehistory lacks a modern chronological framework and that the realisation of such a chronology is central to a study of the islands past. In order to provide such a framework, the second section re-examines two key excavations from Scilly: O'Neil's excavation of the entrance grave of Knackyboy Cairn (1952) and Butcher's excavations at the settlement of Nornour (1978). The pottery sequences from these excavations will be used to construct a framework in which to re-consider the chronology of Scillonian prehistory. Based upon the above analysis, and the study of museum archives, the final section provides a chronological overview of the islands prehistory from the first evidence of a human presence on the islands (Mesolithic) until the end of the Iron Age (*circa.* AD 43). Data used within this chapter has been drawn from published and archival accounts of past excavations and fieldwork and through the study of Scillonian artefacts held within museum collections. Museum collections studied in the course of this research include those from: The Isles of Scilly Museum (Appendix K), The British Museum, (Appendix K), Penlee House and the Royal Cornwall Museum (www.chain.org.uk).

5.1 Problems with the chronology of Scillonian prehistory

Twenty eight radiocarbon dates are available from prehistoric settlement and burial contexts on Scilly (Appendix A), but discussion of settlement and monument sequences and the dating of individual sites are still dependent upon an understanding of the ceramic assemblages associated with them. Unlike mainland Cornwall, no detailed study of

Scillonian ceramics has taken place and very little has been published. The terminology used in the description of Scillonian pottery is vague, inconsistent, and compounded by the use of different systems for the classification of vessel types, fabrics and decoration. A clear and consistent system of classification (i.e. that suggested by the Prehistoric Ceramics Research Group [1995]) will be adopted in this research to describe the ceramic database for Scilly. Through the adoption of such a scheme much of the confusion generated by terms such as: Scillonian urn, decorated urn, megalithic pottery or comb-stamped, comb-impressed and rouletted ware (all of which have been used to describe the same pottery) may be overcome (Ashbee 1974; Daniel 1950; Dudley 1967; Hencken 1932). It is only after this old terminology has been re-addressed that the prehistoric pottery from Scilly can be placed within the context of contemporary archaeological debate.

The majority of archaeological research on Scilly was carried out between 1930 and 1960, and the present chronological sequence does not take into account the major revaluation of the British Later Prehistoric chronology that has taken place since the 1960s (Barrett 1976, 1980; Burgess 1969). This re-evaluation has drawn back what had been considered as Middle Bronze Age ceramics (such as food vessels, and collared urns) into the Early Bronze Age, which is terminated at around cal 1600 BC by the end of the Wessex grave series (Barrett 1980). This shifting of chronology has had a serious effect on the Deverel-Rimbury and Trevisker series that had once been assigned to the closing stages of the Bronze Age but now must be re-assigned to a Middle Bronze Age (Barrett 1976; Crawford 1922; Patchett 1944, 1951). A second consequence for both national and regional prehistoric pottery sequences has been the lack of Late Bronze Age material resulting from this shift in chronology and its effect upon the postulated foundations for an indigenous developing Iron Age. Barrett reviewed this problem in 1980 in his reworking of the Later Bronze Age ceramic record of lowland Britain. The main effect has been the recognition that a series of decorated and undecorated wide-mouthed carinated bowls and shouldered jars, previously thought to belong to the Early Iron Age, are now recognised to begin in the Later Bronze Age, from as early as the 1100 cal BC.

Hencken was the first to describe the pottery from Scilly in a systematic fashion. He described the pottery recovered from Bonsor's excavations of entrance graves as biconical in form, "like two truncated cones placed base to base" describing their fabric as "extremely coarse, blackish, very thick, micaceous and gravely" (Hencken 1932: 22). Hencken suggested that the pottery from the entrance graves and from a midden at Halangy Porth were of a similar type, being characterised by a series of bucket, barrel and biconical vessels, frequently with pierced lugs, and decorated on their upper halves with a series of square toothed comb or twisted cord impressed decoration. This decoration takes the form of a series of horizontal lines of impressions around the circumference of the vessel. Occasionally, decoration is more elaborately executed, taking the form of horizontal bands or chevrons organised around the upper portion of the vessel (Hencken 1932, 22, fig.9). Although Hencken could not directly date this pottery, it was presumed to be contemporary with the entrance graves and was appropriately named 'Scillonian Megalithic Pottery'.

The influence of Hencken's work, and particularly the publication of Bonsor's drawings, has had an enormous influence upon later field workers, forming the primary reference material for the building of chronologies for the islands and for the comparative study of Scillonian material. However, the illustrations published by Hencken represent only a fraction of the sherds from within the British Museum (which may only represent a fraction of those excavated by Bonsor [Ashbee pers.comm]). Of particular interest is the provenance for this pottery in the British Museum register, which includes an entry for an excavation by Bonsor at 'Barrow A' Normandy Down (British Museum Archive: 1926/11/12/40-44). Hencken (or subsequent writers) does not refer to this excavation in his account of the work carried out by Bonsor on Scilly. Ashbee notes that neither O'Neil in the 1950s nor himself in the 1970s succeeded in tracing any record of the 'Bonsor material' from the British Museum, resigning it to the category of 'lost in the British Museum' (Ashbee pers. comm.). These findings demonstrate that past attempts at creating a cultural and chronological sequence for the prehistory of Scilly have been founded upon a highly selective and incomplete database of material culture.

O'Neil's excavation of the entrance grave of Knackyboy cairn (discussed in detail below) provided the first independent dating evidence for a Scillonian entrance grave and the distinctive comb-impressed and-cord-impressed pottery that it contained. Before radiocarbon dates were available for Scilly, the artefact assemblage from Knackyboy Cairn was the sole means of dating and drawing cross-comparisons between prehistoric pottery assemblages on the islands (Ashbee 1974; Dudley 1967; Grimes 1960). O'Neil suggested that the construction of this monument could not be older than *c.*1200 BC on the basis that a star faience bead found within the monuments chamber was an imported artefact of Egyptian origin, datable to around 2000 BC, and that this artefact must have been traded widely across Europe before reaching Scilly (O'Neil 1952). The development of radiocarbon dating and the recognition of the local manufacture of faience beads in Britain have demonstrated that beads of this type belong to the Late Neolithic and Early Bronze Age (Burgess 2001; Newton and Renfrew 1970; Parker Pearson 1999). O'Neil's 1952 dating resulted in the Scillonian entrance grave and the comb-impressed and cord-impressed pottery found within many of them being attributed to the "Late" Bronze Age (O'Neil 1952; Grimes 1960). This dating is remarkably entrenched within Scillonian prehistory being reiterated as late as 1983 in the 3rd edition of the Department of the Environment's *Official Guide to the Monuments of Scilly*, which states:

> "The evidence of the finds at Knackyboy Cairn shows almost certainly that it was not built until the end of the second millennium around 1200 BC (HMSO 1983, 8).

Isolating the problem

On the basis of current archaeological evidence Scillonian prehistory spans a period from around 7000 cal BC to cal AD 43 (Ratcliffe 1991). The Mesolithic and Early Neolithic of Scilly remains undiscussed within the archaeological literature as it is assumed that island colonisation did not take place until the beginning of the second millennium BC (Ashbee 1973; Thomas 1985). Contra to this belief, these early periods are represented on Scilly by finds of distinctive flint tools, such as microliths, Larnian blades, flaked and polished axes and round bottomed, Neolithic Hembury pottery (Clough and Cummins 1988; Thomas 1985, 105, fig.42). The Hembury pottery has close comparisons with south-west Britain where it is dated to the fourth millennium BC (Mercer 1986). Whether the islands were permanently occupied during this period or only visited seasonally is not significant at this point in our discussion. The important point is that we can recognise, distinctive artefacts that can be slotted into an accepted mainland chronological sequence thereby allowing a degree of chronological resolution.

In contrast, the long period spanning the Later Neolithic to the Early Iron Age (3000 cal BC – 300 cal BC) presents a major chronological problem for Scillonian prehistory. The pottery of this period is represented by a series of decorated and plain ware vessels many of which are unique to the islands. Of particular interest here is the presence of biconical comb-impressed and cord-impressed pottery (Ashbee 1974, 248, fig. 53; Hencken 1933). The lack of a detailed understanding of this period has resulted in the homogenisation of the pottery repertoire into a single ubiquitous category of 'prehistoric' to describe a wide chronological range of material (Ashbee 1974). This homogenisation remains one of the biggest obstacles to the production of a detailed later prehistoric sequence for Scilly. This period is central to an understanding of Scillonian prehistory as the majority of the islands settlements and monuments fall within its time frame. The unpacking of the ceramic repertoire of this period will be the main focus of the following analysis.

The Later Iron Age (300 cal BC – cal AD 53), with the exception of Ashbee's discussion of the Porth Cressa cist, has received little attention in discussions of Scillonian prehistory. However, this period is chronologically less problematic than the earlier period (3000cal BC-300cal BC), as it is marked by the presence well dated pottery forms, such as South-Western Decorated (Glastonbury Ware), and cordoned ware, that can be fitted into the well established mainland Iron Age pottery sequence (Avery 1972; Miles 1977; Quinell 1986).

5.2 The creation of a chronology for Scillonian prehistory

In order to address the problems of the current chronological sequence of Scilly it is necessary to examine a large assemblage of pottery covering the problematic period *c.*3000 cal BC to *c.* 300 cal BC, to ascertain whether noticeable changes within the ceramic record occur, and to isolate whether these changes can be linked to a chronological sequence. This will be achieved by re-evaluating two key excavations within Scillonian archaeology, O'Neil's (1952) excavation of Knackyboy Cairn and Butcher's (1978) excavation of the settlement of Nornour. These particular sites were chosen firstly, because they span the time period that we wish to consider (3000cal BC-300cal BC) and secondly, because in each instance large pottery assemblages are associated with clear stratigraphic and constructional sequences.

5.2.1 Knackyboy Cairn

An entrance grave is a roughly circular cairn of stone and earth, revetted by a kerb of boulders and containing a chamber. Chamber walls are constructed of orthostats or coursed walling and covered by large capstones. The chambers of these monuments usually occupy the centre of the mound and are accessed via an entrance within the kerb. Entrance graves have a very limited distribution within the British Isles, being restricted to the Isles of Scilly and West Penwith, Cornwall. On Scilly, 96 entrance graves are recorded on the Sites and Monuments Record, compared with five on the Cornish mainland (Ratcliffe 1989).

Knackyboy Cairn was excavated in 1949 but prior to this excavation the monument's chamber had been disturbed by earlier antiquarians, leaving only a small section intact (Daniel 1950). From this undisturbed area, over 200kg of pottery was recovered from a series of stratigraphic phases of deposition (Fig 5.1).

A date for the initial construction of Knackyboy Cairn is suggested by the location of a flaked flint axe sealed beneath the cairn of the entrance grave (O'Neil 1952). The intentional placement of this artefact immediately on the ancient land surface prior to the construction of the monument suggests that it represents a foundation deposit associated with the monument's construction. This process of structured deposition at burial monuments will be discussed in Chapter 7. In Britain, flaked flint axes are found slightly earlier than polished axes, dating to between *c.*4000 and 3000 cal BC. This would suggest that Knackyboy Cairn was constructed in the Neolithic during a period where elsewhere in Britain Hembury Ware was being replaced by Later Neolithic pottery such as Peterborough and Grooved Ware. Unfortunately, this period of prehistory on Scilly and West Cornwall is problematic as recognisable Later Neolithic pottery is largely absent (Mercer 1986; Parker Pearson 1990, 1995, 1999d).

The first detectable use of the monuments chamber comprised of a deposit of black soil, contained a number of coarse and gritty pottery sherds. This deposit was found upon the old land surface and beneath the later stone paving of the chamber (O'Neil nd.k). It was not possible in the course of this research to locate the pottery from this context but, O'Neil's description of it as coarse and gritty sets it apart from the later pottery and may be suggestive of Hembury Ware. This interpretation is supported by sherds of Hembury Ware from the entrance graves of Bant's Cairn and North Hill, Samson (Hencken 1933), although in both instance this pottery was not found within secure contexts. Deposits, similar to that found at Knackyboy Cairn have also been found sealed by later paving at an entrance grave on North Hill, Samson (Hencken 1933) and at Obadiah's Barrow (Hencken 1933). At Obadiah's Barrow the discovery of disarticulated human remains within this deposit clearly demonstrated that inhumation was practised at this monument prior to the internment of cremation burials. The practice of early inhumation burials at Knackyboy Cairn cannot be demonstrated, but the evidence from Obadiah's Barrow suggests the possibility. The absence of inhumation burials from Knackyboy Cairn (and other entrance graves) might be explained by a combination of factors such as: the acid soils of Scilly which are not conducive to the preservation of bone, the reuse and tidying of burial chambers over considerable period of prehistory and the limited number of entrance graves excavated. Although the evidence is inconclusive, an early origin (*c.*4000 cal BC) for the Scillonian entrance grave should be considered (Whittle 1977).

Turning to the excavation of the chamber of Knackyboy Cairn three stratigraphically discrete layers can be identified. The lowest and hence earliest of these comprise eight primary vessels decorated on their upper halves with horizontal rows of comb and cord impressed decoration (Fig. 5.1). These vessels contained cremations and were placed directly upon the stone flagged floor of the chamber. The vessels are of a finer fabric than those from subsequent layers and of a similar form described by O'Neil as elegantly biconical (O'Neil 1952, 25-29). Similar pots have been found at the entrance graves of Bant's Cairn, North Hill, Samson, Obadiah's Barrow, Pernargie Carn, and Porth Hellick Down (Ashbee 1974; Hencken 1932, 1933; O'Neil nd.j).

Above these primary vessels a thick deposit of ash, charcoal and cremated human bone occurred. This deposit was placed directly on top of and between the primary urns, but was not found beneath them, demonstrating that the two layers were not contemporary. No comb or cord impressed pottery was found in this or subsequent layers of the chamber. Although a stratigraphic relationship between these layers can be shown it is not possible to demonstrate the period that may have elapsed between these two depositional episodes. Within the deposit of ash and bone, a few scraps of a copper-alloy, five faience beads (including a star-shaped bead) were found (O'Neil 1952, 24, pl. XI). Ashbee has interpreted the metalwork as: a hook from an earring, similar to examples found within Beaker graves (Ashbee 1960, 110), and the terminal end of a bracelet similar to one found in a Beaker grave at Garton Slack, Yorkshire (Ashbee 1974, 241; Clarke 1970, 397, fig. 946d). The faience beads are of a similar age and through analogy with beads from elsewhere in Britain date to between 2200 and 1600 cal BC (Burgess 2001, 280; Newton and Renfrew 1970, 203, Nowakowski 1999). The contemporarily of the dates of the artefacts from this context would suggest that it was formed during the Late Neolithic / Early Bronze Age (*c.*2200-1600 cal BC) thereby providing a *terminus ante quem* for the primary comb-impressed and cord-impressed vessels and a *terminus post quem* date for subsequent layers.

Immediately onto of this layer of ash and bone further vessels were found. This pottery was noticeably different from the primary vessels and comprised of a series of coarse ware bucket and globular shaped vessels. O'Neil's drawings and description of this layer suggests that stratigraphically the globular vessels may have belonged to an earlier phase of deposition than the bucket-shaped vessels (O'Neil 1952, nd.k). Of the globular vessels identified, two intact pots, and a number of sherds, were decorated with incised decoration (Fig.5.1). Plain bucket shaped vessels made up the majority of this layer, and represent the final internments placed within the monuments chamber. A bucket-shaped vessel was found within rubble and soil used to seal the entrance of the chamber and another was placed as a satellite burial within the structure of the monuments cairn (O'Neil 1952). These vessels are comparable with bucket and globular vessels of the Deverel-Rimbury series of south Central Britain and would therefore, through analogy, date to the Middle Bronze Age (*c.*1600 and 1200 cal BC).

Dating the Knackyboy Cairn pottery sequence

The artefactual and stratigraphic evidence from the excavation of Knackyboy Cairn demonstrate that it's chamber was used and reused over a considerable period of time. In order to use the pottery sequence from Knackyboy Cairn to inform a framework for Scillonian prehistory the key question that needs addressed is, what date were the first detectable internments placed within the monuments chamber in comb-impressed and cord-impressed pots. A *terminus post quem* for this pottery is provided by the flaked flint axe placed on the ancient ground surface below the monument prior to it's construction. This axe through analogy with other similar axes from the mainland dates to between 4000-3000 cal BC. A *terminus ante quem* is provided by the faience beads and metalwork from the thick layer of ash and cremated bone stratigraphically above the comb-impressed and cord-impressed pottery. These artefacts all date to between 2200-1600 cal BC.

On the basis of this analysis it would seem reasonable to argue that impressed and cord-impressed pottery within Knackyboy Cairn dates to the Late Neolithic/Early Bronze (*circa.*3000-2000 cal BC). If this interpretation is correct then it would be significant as no pottery of this period has yet been demonstrated for the islands. Only one meaningful radiocarbon date from Scilly can be used to clarify this interpretation. This date comes from a sample of charcoal taken from a hearth that sealed a pit containing comb-impressed pottery, found below house B at Little Bay (Neil 1983). The radiocarbon determination derived from this sample produced a date of 2124-1525 cal BC (HAR-4324; 3490±100BP). This date provides a *post ante quem* for the deposition of comb-impressed pottery within this feature and supports the postulated dating of this pottery at Knackyboy Cairn.

In Cornwall, Late Neolithic Peterbough and Grooved Ware pottery are rare, with the first confirmed example of Grooved Ware only recognised in the county as recently as 1972 (Buckley 1972; Gibson 1982; Mercer 1986; Thomas 1985; Todd 1987). In the place of these widely recognised pottery types local Neolithic pottery styles are found, comprising of coarse fabric jars and bowls with flat bases, simple outlines, and flat or bevelled rims. Sometimes these vessels are decorated with finger tipping, combing, cord impressions and grooving (Megaw 1976; Radford 1958; Pratchett 1944; Thomas 1985).

Examples of this Cornish pottery occurs in two Penwith chambered tombs, Zennor Quoit and Sperris Quoit (Thomas and Wailes 1967), and in a cist at Poldowrian, associated with a radiocarbon date of 2910-2140 cal BC (HAR-3108). This pottery has also been found as a primary deposit within the chamber of an entrance grave at Bosiliack, St Just-in-Penwith where it suggests a Later Neolithic origin for the six entrance graves in West Penwith (Thomas and Ratcliffe 1984). Parker Pearson (1990, 1995) suggests that this pottery in Cornwall represents an regional variation of Grooved Ware.

Whilst similarities in decoration, between the comb-impressed and cord-impressed pottery from Knackyboy Cairn and the Late Neolithic pottery found within Cornwall, can be made (Thomas 1985) the fine fabric and biconical profile of the Knackyboy Cairn pottery mark it out as uniquely Scillonian. The analysis of Knackyboy Cairn suggests that Scillonian comb-impressed and-cord-impressed pottery represents a separate regional style of mainland forms of Late Neolithic pottery. The dating of this pottery, although still imprecise, can now be assigned to the late third millennium BC rather than to the second millennium BC as previously assumed (Ratcliffe and Sharpe 1991).

5.2.2 A Reconsidering the chronological sequence of Nornour

The settlement of Nornour comprises eleven stone houses built along the southern edge of the island of Nornour, a small now uninhabited island within the Eastern Isles. Nornour was excavated initially between 1962 and 1966 by Dudley (1967), and then again between

1969 and 1973 by the Department of the Environment (Butcher 1978). From these excavations, Nornour produced the largest assemblage of prehistoric domestic pottery on the Islands. The large amount of Bronze and Iron Age ceramics recovered from the earlier excavations are all recorded as unstratified, coming from the substantial rubble fillings of huts within the western part of the settlement. However, Butcher's excavations between 1969 and 1973, within the eastern part of the settlement, produced large quantities of stratified prehistoric pottery. Most notably, Butcher provided a detailed constructional sequence for this part of the settlement which was secured chronologically with radiocarbon dates (Butcher 1978). These dates broadly span the period 1500 to 600 cal BC, although it must be noted that the earlier date relates to a phase late on within the constructional sequence of the settlement. Equally, the later does not date the settlement's final occupation. The sequence from Nornour provides an opportunity to examine a substantial assemblage of pottery and to explore its potential for the construction of a pottery sequence.

The past excavations at Nornour have been published in full (Dudley 1967, Butcher 1978) but, as stated earlier, the lack of a stratigraphic sequence from Dudley's excavations within the western side of the settlement seriously limits its usefulness in addressing our current problem. Therefore the following discussion is based upon data produced by Butcher in her excavations of the eastern side of the settlement. Although Butcher has produced a detailed study of the constructional sequence at Nornour, little discussion has been given to the ceramics that this sequence has produced. The analysis of this pottery has been minimal, and amounts to dividing it into fabric groups and pottery types and to the publication of selected vessels. Although a complete catalogue of all pottery from the site and its context has been published within Butcher's report, no attempt has been made to link these artefacts to the settlement's constructional sequence.

5.2.3 Settlement phases at Nornour

The first step in the production of a pottery sequence for Nornour is to outline briefly the construction sequence for the settlement. In order to achieve this, Butcher's sequence has been simplified into seven periods. This is necessary due to the nature of the contexts in which much of the pottery has been found. Many of these contexts are not primary deposits as they often relate to the abandonment of houses (this process of deposition will be discussed in Chapter 6). Although not primary, these contexts, for the purposes of this present work, can be considered as chronologically discreet when it can be demonstrated that they contain coherent sets of artefacts and are sealed by subsequent deposits and structures.

Period 1 (Fig. 5.2)

Timber structure below House 10

The earliest structure is in the area that later occupied House 10. This structure is represented by five post holes cut into the ram, forming an arc of approximately 4.5 metres in diameter (Butcher 1978, 36, fig.6). This compares closely with the dimensions of the later stone houses from this site. These features are sealed by deposits associated with the later construction and occupation of House 10.

Hearths north of House 5

Two hearths were found to the north of House 5; these could not be associated with any structure. The hearths were set into the ram and a greyish occupation layer had accumulated round them; this layer was cut by the construction of house 5 to the south-west. To the east, the occupation layer associated with the hearths occurs stratigraphically below the early midden of House 10, this suggests that the hearths represent early features of the settlement.

Hearths south-west of house 10

Two hearths, one rectangular and one circular located near the south-west corner of House 10 and sealed by midden layers. Both hearths were located close to the walls of House 10 suggesting that they predate its construction. Equally, both hearths are outside of the arch of postholes found below house 10 suggesting that they, like those north of House 5, were located outside or within makeshift shelters not identified. The only feature that can be shown to be contemporary with these hearths is a single posthole located 0.6m away for the circular hearth.

Period 2 (Fig. 5.2)

House 10 (first phase)

House 10 in its first phase was defined by a phosphate rich, dark occupation layer that sealed the postholes of Period 1 covering an area of around 4.5 m (Keeley 1978). The thick north-western wall of House 10 forms a limit to this deposit, the line of which is continued by depressions in the ram, which may once have held stones within the southern part of House 6. To the east the occupation layers are cut by stones, forming the wall of House 11; on the south they appear in the cliff-face, where they have been cut by erosion.

Midden north-west of House 10

Outside the north-western wall of house 10 there is a large midden lying immediately on the old ground surface and extending for about 3.6 m to the north (Butcher 1978, 98). The full extent of this midden is not known as it has been cut into on its east side by the construction of House 6, and on its west by the construction of House 7. Butcher has demonstrated that this midden has not been cut by the construction of House 10 but rather has formed against its walls; she has also shown that both the midden and the walls of House 10 lie immediately upon the old ground surface. On this basis, and in the event that all of the other houses in the vicinity are later (House 5, 6 and 7), it would seem likely that the midden is contemporary with the first occupation of House 10 (Butcher 1978, 38-40, fig. 11).

Period 3 (Fig. 5.2)

House 11

Part of House 11 has fallen into the sea; the remaining northern part is defined by a curving wall of irregular stones. The maximum surviving internal diameter is 3.6 m but the curve is increasing at the point where the walls are cut off; it seems that the house may have been roughly oval in shape. The floor consists of the natural sub-soil or ram onto which a thin occupation layer has formed. There is a doorway through the wall on the northern side which is approached via a series of stone flagged steps. Presumably when this entrance was in use there were no houses to its north and the doorway would have led out into the open. It is, however, possible that this doorway may have led into the ruins of the first phase of house 10, or that both houses, for at least some of their history, were jointly occupied (as seen later in Houses 6 and 9). This entrance was deliberately blocked by the wall of the later phase construction of House 10 (Period 4) and this blocking was further sealed by the south wall of House 6 (Period 5). The lower filling of the interior of House 11 consists of stones and dark soil. Presumably this filling occurred quite early in the occupation of the site as it does not seem to have been in use after Period 3 (on the evidence of the blocked doorway, although access may have continued from the south). A further filling above this remains unsealed by later occupation and although it would appear to fit within this period, could belong to any period subsequent to Period 3.

Period 4 (Fig. 5.2)

House 10 (second phase)

House 10, in its later and surviving form, is of an irregular oval shape, of approximately 4.2 x 3.6 m in size. To the north-west it is defined by the wall surviving from its earlier phase whilst to the north-east its walls have been destroyed by the construction of house 6. The entrance passage described under Period 2 was certainly still in use in Period 4 when it was flanked by two radial piers which bounded an area of paving lying over the earlier occupation layers. A thin occupation layer was found within the northern half of this house which had been sealed by the construction of House 6.

Period 5 (Fig. 5.2)

House 6

House 6 is a circular structure with a diameter of 5.1 m. This house is clearly late within the constructional sequence as its western wall cuts the Period 2 midden and its southern wall has been constructed over the rubble of House 10 (Period 4), and over the blocked north doorway of House 11. No evidence of radial piers were found in this house but a massive cross wall was built east-west across it, cutting off the northern section. Access to this northern area appears to have been maintained by way of a small gap left in the wall to the west. A number of hearths were found within this house that were associated with a thin occupation layer, including three hearths built against the southern side of the cross wall. A further well-made hearth was found within the southern half of this house and samples taken from this hearth for magnetic dating produced a mean direction of declination of 3.2 degrees west; inclination 69.7 +/- 2.3 degrees (SC40-53; single standard error normalised to Meridian) that suggests a date range of between 1600-1300 cal BC (Butcher 1978, 67). Above the occupation layer the entire structure was filled with rubble up to the level where the cross wall now stands.

House 9

House 9 is a very irregular oval shaped house which lies immediately to the east of house 6 and to which it provides the only access via a series of steps. Butcher identified two phases of occupation for House 9. The first is represented by a dark sticky occupation layer found throughout the interior of the house; a stone box hearth is dug into this layer, and is clearly contemporary with it. Radiocarbon samples taken from this hearth produced date ranges of 1487-920 cal BC (HAR-457; 2990 ± 100BP) and 1430-1020 cal BC (HAR-460; 3020 ± 70BP). Over this occupation, a layer of large stones and midden material appear to represent a deliberate filling of the house. Immediately above this filling a second occupation layer was found associated with a further hearth, and above this the house was filled with rubble and dark soil containing midden material. It is obvious from the plan that House 9 must have been in use at the same time as House 6, to which it forms the only access, but the possibility of an earlier use for House 9 must be considered. Given the very irregular masonry of all houses at Nornour it is seldom possible to be certain that parts of walls have not been rebuilt, and on construction grounds alone it is quite possible that the doorway between the two may have been made at a later date than the original construction of House 9. However, House 6 is known to come late in the sequence of houses on this site (because it overlies both phases of house 10 and the doorway to house 11), what can be said with confidence is that structural periods 1-4 all ante-date the above radiocarbon dates.

Period 6 (Fig. 5.2)

House 5

House 5 lies to the west of, and downhill from, the houses already described. It is nearly circular with an approximate diameter of 4.5 m. House 7 is inserted into its north-eastern side, and will be described later. House 5 differs from the other houses already described in that it is virtually free-standing. The entrance to this house is via a passage through the eastern wall. The walls are placed upon the surface of the ram with no attempt made to form a foundation slot. The ram surface inside the house slopes upwards towards the north but it appears that some attempt has been made to level the worst irregularities by filling them with soil, clay or ram. This seems to be the only floor as occupation material lay immediately upon it. The southern half of the house contains four radial piers varying between 1.1 m and 1.5 m in height. All the piers are founded directly on the ram but are secondary to the house in the sense that they are butted against the inner face of the hut wall. There are two box hearths in the centre of House 5, each formed by flattish slabs of granite laid on edge to form a square with sides of approximately 50 cm. Charcoal from these hearths has produced a radiocarbon date of 1015-600 cal BC (HAR-240; 2690 ± 90 BP) for the first occupation of this house. Layers of black ash from around the central hearths overlay a dark, sticky occupation layer, that could not be traced elsewhere in the house. Throughout the house, numerous large stones representing wall tumble were found, amongst which was a dark soil containing pockets of shells and other midden material. This material continued down unchanged to the ram.

Period 7 (Fig.5.2)

House 7

The north-east corner of house 5 has been reconstructed to include a small annex, House 7. This is roughly semicircular in plan, measuring approximately 3 x 1.75 m with a doorway adjoined to the outer end of the entrance passage to House 5. The eastern side of the house shows clear signs of rebuilding or repair in the form of a wall built against its original eastern wall. The construction of this secondary wall sealed a box hearth below it from which a radiocarbon date (from charcoal) has produced a date of 24-380 cal AD (HAR-459; 1840 ± 70 BP).

5.2.4 Dating the sequence

Periods 1-5

The constructional sequence for Periods 1-5, as already discussed, can be demonstrated on stratigraphic grounds. This sequence is terminated by the construction of Houses 6 and 9. Two radiocarbon dates are available for House 9 both of which come from a sealed midden in the lower filling of the house associated with its abandonment. The close matching of these two dates suggests a late second millennium terminal date for Period 5. This is further supported by the magnetic samples taken from the two hearths in house 6. This date range adds further weight to the radiocarbon dates from House 9 and confirms the contemporary occupation of Houses 6 and 9.

This suggests that the pottery from Period 1-5 all ante-date these dates although it is difficult to estimate a start date for this period as no independent dating evidence is available for Periods 1-4.

Periods 6-7

The constructional sequence for Periods 6 and 7, as discussed, can be demonstrated on constructional and stratigraphic grounds to proceed the Period 1-5 houses to the east. A radiocarbon date produced from charcoal from the central hearth of House 5 (contemporary with the occupation of this house), suggests a contemporary or subsequent occupation between this house and Houses 6 and 9 to the east. It can therefore be suggested that the pottery from Periods 6-7 to post-date those from Periods 1-5 although as described above some contemporarily may have occurred.

The radiocarbon sample taken the hearth below the reconstructed eastern wall of House 7 should provide a date for this structure. The date produced from this sample appears to be too late and cannot be justified on constructional or stratigraphic grounds. This conclusion is further supported by the absence of Romano-British artefacts from anywhere within the Eastern Settlement area It is presumed that the sample used to produce this date must have become contaminated or that the material sampled was intrusive, perhaps through root or rodent disturbance.

The pottery sequence from Nornour

Before moving on to a detailed discussion of the pottery, it is necessary to isolate a set of fabric groups and vessel types through which to characterise the pottery from this constructional sequence. In order to aid the following discussion of this pottery sequence, Butcher's illustrations of this pottery have been reproduced (Figs.5.3-5.16). These illustrations have been re organised chronologically based upon the constructional and stratigraphic sequence outlined above.

Fabric groups

The pottery from Nornour comprises 4522 sherds, the majority of which are coarse, plain body sherds. Butcher divided this assemblage into eleven fabric groups. However, considerable variability between these groups occurred resulting in single vessels displaying the characteristics of two or more fabric groups. To overcome this problem I have simplified Butcher's scheme of classification into four groups, three represent local granitic fabrics A-C, and a forth a non-local quartz fabric, D.

The three granitic wares are of a similar dark grey fabric with flecks of mica clearly visible on their surfaces. The thin sectioning of these sherds by Williams has shown that they are principally composed of a local clay matrix, scattered through with fragments of granite, feldspar, quartz, mica and tourmaline (Williams 1978a: 73). Although it is likely that this pottery was manufactured on the islands, a potential mainland production site for at least some vessels must not be ruled out as granitic pottery is also common on Cornish sites such as Bodrify (Dudley 1956) and Carn Euny (Williams 1978b) which are also situated on granite. These granitic wares can be sub-divided into three groups based upon their thickness and upon the size and frequency of their inclusions. The analysis of this pottery was carried out with a hand-lens (×10 magnification) and using the Prehistoric Ceramic Research Group's guidelines (PGRG 1995). The fabric groups identified are:

Fabric A: Coarse Granitic (Equates to Butcher (1978) groups A, B, B+ and J

Colour:	Brown pinkish grey (surface)
Matrix:	*Composition*: Coarse granitic clay
	Particle size: (0.5-1 mm)
Tempering:	*Composition:* Granite and quartz.
	Size: 3-5 mm (occasionally up to 8 mm)
	Frequency: Common to very common (20 - 40%)
Thickness:	8-20 mm (in cross-section)
Hardness:	Soft to very soft
Surface:	Rough (although occasionally smoothed)

Fabric B: Medium Granitic (Equates to Butcher (1978) groups C, G, H and K**)**

Colour:	Brown pinkish grey (surface)
Matrix:	*Composition:* Medium granitic clay
	Particle size: 0.25-0.5 mm
Tempering:	*Composition:* Granite and quartz
	Size: 1-3 mm,
	Frequency: sparse to moderate (5-10 %)
Thickness:	5-10 mm (in cross-section)
Hardness:	Soft to fairly hard
Surface:	Usually smoothed and occasionally burnished

Fabric C: Fine Granitic (Equates to Butcher (1978) groups E and F

Colour: Brown pinkish grey (surface)

Matrix: *Composition:* Medium granitic clay

Particle size: 0.25- 0.5 mm)

Tempering: *Composition:* Granite and quartz

Size: Less than 1 mm, sparse to moderate

Frequency: 5-10 %

Thickness: 5-8 mm (in cross-section)

Hardness: Soft to fairly hard

Surface: Smoothed and sometimes burnished

A non-granitic ware has been identified through petrological analysis (Fabric D) as having a different source from the other pottery from Nornour. Thin sectioning of this pottery showed inclusions of quartz and mica but the absence of granitic fragments from this pottery suggests that it was not made locally although as these inclusions are so common in south-west Britain it is not possible to suggest a likely area of origin (Williams 1978a, 73). Only one sherd of fabric D was identified from Nornour although it is acknowledged that only a small percentage of pottery was submitted to detailed examination. Fabric D can be characterised as:

Fabric D: (Equates to Butcher (Butcher 1978) ware D)

Colour: Reddish grey (surface)

Matrix: *Composition:* Medium clay (quartz and mica)

Particle size: 0.25-0.5 mm

Tempering: *Composition*: Quartz

Size: Less than 1 mm,

Frequency: sparse to moderate (5-10%)

Hardness: Hard

Thickness: 6-7 mm (in cross-section)

Surface: Smoothed and sometimes burnished.

Vessel type

Of an assemblage of 4552 sherds 90% comprise un-diagnostic body sherds. The remaining 10% can be related to 14 vessel types (Fig 5.17). These vessel types are taken from Butcher (1978) and comprise:

Type 1: Vessels with nearly straight sides and everted rims

Type 2: Jars with internally bevelled rims

Type 3: Jars with narrow everted and internally bevelled rims

Type 4: Jars with nearly straight sides and plain rims.

Type 5: Jars with inward sloping sides and rims with an internal chamfer

Type 6: Small upright jars with a straight, slightly moulded rim.

Type 7: Jars with short upright moulded rims narrower than their bodies.

Type 8: Carinated bowls

Type 9: Small shouldered jars with narrow everted rims.

Type 10: Jars with inward sloping sides and short upright moulded rims narrower than the bodies.

Type 11: Jars with inward sloping sides, carinated shoulders and short upright moulded rims narrower than their bodies.

Type 12: Round bodied bowls with simple rims

Type 13: Bowls with a sharp carination and high flaring rims made from Fabric D

Type 14: Round bodied bowls with horizontal cordons raised by burnishing.

A study of whether correlations exist between these pottery, fabrics types and chronology and will be explored below.

5.2.5 Interpreting the pottery sequence from Nornour

The constructional and depositional history of Nornour represents a continuous sequence, partially dated through radiocarbon determinations. This sequence can be divided into two periods, an early, represented by Periods 1-5 and a late represented by Periods 6-7. Period 5 is terminated at around 1200 cal BC by radiocarbon and magnetic dates from Houses 6 and 9, whilst Period 6 is dated to around 900 cal BC by a radiocarbon date from House 5. Let us now attempt to refine the dating of this sequence by examining the pottery associated with it. The focus here will be the identification of chronologically distinctive pottery forms that may act as index points within the sequence from Nornour.

Comb-impressed and cord-impressed pottery from Nornour

Let us begin our analysis of the pottery assemblages from Nornour by restricting discussion to one type of prehistoric pottery, comb-impressed and cord-impressed wares. We have previously argued that comb-impressed and cord-impressed pottery on Scilly represents a form of local Late Neolithic/Early Bronze Age pottery, dating approximately to between 3000 cal BC and 1800 cal BC. If this dating is to be maintained we need to account for the presence of this pottery at the settlement of Nornour.

Only four sherds of comb-impressed and two sherds of cord-impressed pottery are found within the Nornour pottery assemblage; all from the earliest phases of the settlement (Fig.5.3 no.6; Fig.5.5, nos.10, 11, 14; Fig.5.6, no.22, 23). The contexts from which this pottery occurs does not relate to the occupation of the houses, but to their construction and abandonment (Butcher 1978, 75, 83). The contexts for this pottery are:

- The fill of a hearth north of House 5 (Period 1).
- A midden north-west of House 10 (Period 2).
- The abandonment and infilling of House 11 (Period 3).
- Within the wall fill of House 10 (Period 4).

The contexts of these sherds suggests that their inclusion within the Nornour assemblage might have resulted from the unintentional incorporation of residual material from earlier occupation. Alternatively, this material may have been placed within such contexts intentionally as foundation deposits. The former interpretation is supported by the heavy abrasion of these sherds suggesting that this material had moved around in the soil for a considerable period prior to its final deposition. It may be postulated that the source of this material may relate to earlier settlement at Nornour, perhaps associated with early features of the site such as, the arch of post-holes located below House 10 and the three Period 1 hearths. These early features of the settlement may represent previously unrecognised Late Neolithic / Early Bronze age occupation at Nornour. However the interpretation of this material as residual does not necessarily rule out its intentional incorporation within later features. The structured deposition of earlier artefacts within later settlements has been attested elsewhere in Britain and this interpretation at Nornour should be considered possible (Bradley 2002; Brück 1999b, 2001). Structured deposition within Scillonian prehistoric settlements will be explored further in Chapter 6. For the purpose of this present discussion the key point is that the presence of comb-impressed and cord-impressed pottery at Nornour cannot be used to suggest either an early date for the stone built houses identified by Butcher (1978) or for a predominantly 2nd millennium BC date for comb-impressed and cord-impressed pottery.

Plain ware pottery from Nornour

The Nornour pottery assemblage comprises principally of plain coarse ware vessels, around 88% of which are in fabric A (Fig.5.18). These coarse ware vessels comprise of a series of large and medium sized storage and everyday vessels and whilst they occur in all periods they are most common within the earlier constructional phases of the settlement. Many vessel types identified within the earlier phases of the settlement continue into later phases where they occur in a wider range of sizes and fabrics (Periods 1-5). Of the vessel types outlined, only Type 1 does not continue into the later period, being restricted exclusively to periods one and two. Although a direct correlation between vessel size and fabric type cannot be exclusively demonstrated, a trend within the data suggests that a relationship between coarse fabrics and larger vessel sizes might be significant (Fig 5.19, 5.20 and 5.21).

In contrast, pottery made from medium and fine fabrics (B, C and D), are associated with smaller sized vessels and predominantly restricted to later constructional phases (Periods 6 and 7) (Fig.5.20 and 5.21). The prevalence of medium and fine fabrics within later phases of the settlement is chronologically distinctive and suggests an increased range of vessel sizes and types during this period. This wider range of vessels may suggest new practices related to the preparation and consumption of food and drink. This greater range of vessel types and sizes has been noted by Barrett (1980) at Bronze Age sites within lowland southern Britain where he has attributed such changes as indicative of a Middle Bronze Age/Late Bronze Age transition (*circa.*1100 cal BC). The dating of the later constructional phases (Periods 6 and 7) at Nornour complies with Barrett's findings from south central Britain.

Although many the pottery types from the earlier phases of Nornour, such as Types 2, 4, 7 and 10 continue in use throughout these later periods many new forms emerge. These new forms include a series of carinated bowls (Type 8), shouldered jars (Type 9) and round bodied bowls (Type 12). This pottery represents a classic example of a Late Bronze Age assemblage having clear affinities with ceramic forms from central southern Britain studied by Barrett (1980). Barrett has demonstrated that forms such as these, previously thought to start with the Early Iron Age, were found as early as the 11th century BC. Although much work has been done on refining the dating of regional variations of these wares very little of this work has focused on the south-west. This change within the pottery at Nornour is marked by the radiocarbon date of 1015 - 600 cal BC from Houses 5 (Period 6), which indicates a *terminus post quem* for the emergence of this pottery, confirming its Late Bronze Age character.

The recognition of Late Bronze Age pottery within the Nornour assemblage is important as it represents the first evidence of Late Bronze Age pottery on the islands and adds considerably to the distinct lack of this material from the south-west in general (Quinell 1986). The lack of Late Bronze Age pottery from the south-west makes it difficult to draw comparisons with other assemblages, making this assemblage all the more significant. Comparative pottery can be tentatively identified at Bodrify (Dudley 1957) (a site in desperate need of revaluation) and at Dainton, Dorset (Quinell 1996).

Equally, the isolation of Late Bronze pottery in the later phases of Nornour suggests that the coarse plain ware assemblage associated with the earlier phases of the settlement is of Middle Bronze Age date. This interpretation is problematic as similar pottery also occurs within latter phases; its interpretation in this instance can be confirmed by the radiocarbon and magnetic variability dates taken from Houses 6 and 9 and by the absence of recognisable later pottery from this earlier sequence. Middle Bronze Age pottery is thus characterised by large and medium sized plain coarse ware vessels.

From the later constructional phases of Nornour a small number of distinctive Iron Age vessels, (Type 13 and Type 14) can be isolated. Type 13 is a sharply carinated bowl with a flared rim, made from a non-local clay fabric (Fabric D). Two other examples of these vessels (one of which was complete), were found by Dudley in the stone filling of House 1 at Nornour (Dudley 1967, fig.7, no 59, p.14). Examples of this pottery from south-west Britain have been shown to have affinities with the All Cannings Cross-Meon Hill pottery of southern Britain, assignable to the Early Iron Age (Cunliffe 1991: 559).

The second distinctive form of Iron Age vessels are those represented by Type 14, and these occur within Periods 6 and 7. These vessels represent a regional variation of Late Iron Age Cordoned Ware (Cunliffe 1991, 587; Douch and Beard 1970; Gutherie 1969; Miles 1977; Quinell 1986). The closest parallels to these vessels come from Murray-Threipland's excavations at Mawgan-in-Pyder where large cordoned storage vessels, similar to those from Nornour were found (Murray-Treipland 1957, Type H). Cordoned ware in the south-west Britain is datable to the first centuries BC/AD.

The settlement of Nornour spans the second and first millennium BC. The longevity of settlement at Nornour would seem to suggest a general trend on Scilly, (also noted at Little

Bay, St Martin's, Halangy Down, St Mary's and Porth Killier, St Agnes), for the continued use and modification of settlements and settlement locations throughout the island's later prehistory. This longevity of settlement has confused past research on the islands with the chronologically 'mixed' assemblages resulting in the homogenisation of the prehistoric chronology. The characterisation of the pottery assemblage from Nornour and the linking of pottery types with a constructional sequence demonstrates for the first time that chronological markers can be identified and that these may be used to construct a chronological sequence. With the recognition of such a sequence it is now possible to link these findings to other Scillonian material culture to create a chronological framework for the island's prehistory.

5.3 A chronological overview for Scillonian prehistory

In the previous section, I provided a pottery sequence that allowed me to date Scillonian settlements and monuments. We will now use this chronological sequence to provide an outline of Scillonian prehistory. For the purposes of this exercise, I have subdivided Scillonian prehistory into five periods: Pre-Neolithic (8000-4000 cal BC), Earlier Neolithic (4000-3000 cal BC), Later Neolithic/Early Bronze Age (3000 cal BC 1600 cal BC), Middle/Late Bronze Age (1600-1100 cal BC), and Iron Age (1100-AD 43). These subdivisions are informed by the chronological sequence outlined above. It is not my intention to provide an exhaustive account of prehistoric Scillonian settlement, monuments and material culture, (as this will be dealt with in subsequent chapters), but to isolate useful chronologically distinctive characteristics for each period.

5.3.1 Pre-Neolithic (*c.*8000-4000 cal BC)

This period spans from the end of the last glaciation to the beginning of the Neolithic and is thought to be the first period of major occupation in Cornwall (Berridge and Roberts 1986). Traditionally it has been held that Scilly was not visited until the Early Bronze Age. This assumption is based upon the belief that early prehistoric mainland communities would not have had the resources to make a sea crossing from the Cornish mainland (Thomas 1985). In light of growing evidence for Mesolithic watercraft and sea travel in Britain (Fischer 1995; Smith 1992,139-143; Warren 1997), and the discovery of Mesolithic artefacts on Scilly, this argument is no longer tenable.

Distinctive Mesolithic struck flint artefacts are found on Scilly, the majority of which are either stray finds or are from unprovenanced museum collections. The Isles of Scilly Museum and the Royal Cornwall Museum contain large collections of struck flint from the islands, but as no study of these collections has been undertaken by a lithic specialist, the presence or absence of Mesolithic artefacts amongst them is not known. The earliest artefact identified is a large curved-backed point made of coarse white patinated flint, discovered within a previously unassessed flint collection from the Royal Cornwall Museum, Truro (Berridge and Roberts 1986, fig.2, no.4). Jacobi and Barton (1999) describe this artefact as a typical example of an Upper Palaeolithic 'penknife point', similar to those found at cave sites throughout Britain. However, Campbell (1977) notes that penknife points are not solely restricted to the Upper Palaeolithic and a Mesolithic date should also be considered. Other Mesolithic artefacts identified from Scillonian museum collections include two chert obliquely blunted microliths from an unprovenanced Scillonian assemblage (Berridge and Roberts 1986, 33).

At Old Quay, St Martin's Mesolithic flint work has consistently been recovered from the coastal cliff section (Berridge and Roberts 1986; Ratcliffe 1989: 33; 1991). As Mesolithic artefacts are relatively rare on the islands, the identification of Old Quay as a potential Mesolithic flint-working site is a significant discovery. Apart from Old Quay, no other Mesolithic sites have yet been discovered. Other sites might once have been located along the ancient Mesolithic coastline, now destroyed. A number of substantial prehistoric shell middens occur throughout the islands' the majority of which remain undated. The excavation and dating of these middens may demonstrate evidence for Mesolithic activity.

The majority of Mesolithic artefacts identified on the islands are either unprovenanced or lack detailed contexts of discovery. Many have been discovered eroding from coastal cliff faces, from amenities trenches or through the excavation of later sites (O'Neil nd.e; Ratcliffe and Stralker 1996). Significant finds include: a microlith with oblique retouching discovered by Ashbee during his excavations at Halangy Porth (Ashbee 1955, fig.6.1; Jacobi 1979, 48), two Larnian blades from Klondyke Fields (Ashbee 1974: 281) and a tranchet axe sharpening flake from below Samson Hill, Bryher (Berridge and Roberts 1986, 30; Ratcliffe 1989; Ratcliffe and Thorpe 1991).

The attraction of Scilly to Mesolithic hunter-fishers cannot only be demonstrated archaeologically but through analogy with other better studied islands in western Scotland, such as Arran (Affleck *et al* 1988), Islay (McCullagh 1992; Mithen 1989), Oronsay (Mellars 1987), Colonsay (Mithen 1989) and the Isle of Rum (Wickham-Jones 1990), it might be suggested that the island would be visited seasonally for fishing and the hunting of sea mammals and seabirds. Seasonality studies on the otoliths of saithe from Mesolithic middens on the Isles of Colonsay and Oronsay indicated that different middens were occupied at different times of the year (Mellars 1987). This may have resulted from either semi-sedentary occupation of Oronsay and Colonsay or more likely a series of sporadic visits with foragers choosing the most suitable settlement locations on each occasion.

Although the nature of Mesolithic activity on Scilly cannot yet be identified it is clear that these early hunter-fishing communities possessed ocean going boats and the navigational and seafaring knowledge to make the 48km journey from the mainland. It is likely that skin boats similar to the Irish curragh or Inuit uniak would have been used to make such crossings. Although no archaeological trace of these craft survive in Britain prehistoric rock carvings in Norway perhaps provide some indication of what they were like (Smith 1992, 141, fig. 8.1). Skin boats are exceptionally seaworthy and particularly suited to the rough seas of the Atlantic were their lightness allows them to ride waves, in conditions that could not be undertaken in a similar sized wooden boat. It is anticipated that skin boats such as this would have been the principle means of transport both within the archipelago and between the islands and the mainland throughout prehistory.

Further evidence for a Mesolithic presence on Scilly is provided by the pollen sequence from Higher Moors (Scaife 1984). The bottom of this sequence is associated with a radiocarbon date of 5479-5045 cal BC (HAR-3695; 6330 ± 100BP) and appears to represent tree cover consisting mainly of oak and hazel. Birch is also abundant, probably in the form of a shrub growing in exposed coastal localities. Scaife suggests that the birch scrub could be due to initial human disturbances and subsequent abandonment during the Mesolithic. However, as argued in chapter 4 this environmental change may equally have result from the formation and breaching of coastal barriers and the resulting rise in salinity in and around Porth Hellick Bay.

Though the evidence for a Mesolithic presence on Scilly is sparse, it is conclusive. The permanent occupation of the islands during the Mesolithic on the present artefactual evidence seems unlikely. It seems more likely that the islands were occupied seasonally to fish, collect shellfish and hunt sea mammals but would also have provided welcome landfall for mainland Mesolithic offshore fishing forays.

5.3.2 The Earlier Neolithic (*c.* 4000-3000 cal BC)

On Scilly, as elsewhere in Britain, it is difficult to separate the Earlier Neolithic from the Mesolithic. No evidence for settlement or burial has yet been identified for this period on the islands', but the failure to identify permanent 'houses' may be because no equivalent concept to 'home' existed. Rather than the construction of permanent 'houses', identity may have been invested within a culturally specific set of 'occupational practices' in which relationships between people and places were defined, not through permanent attachment to a single locale but through traditions of movement across the landscape and seascape. This perspective allows the incorporation of sites that have confounded the classificatory and interpretative frameworks applied to them. On Scilly such sites include a series of pits which have yielded Hembury Ware pottery and are discussed below.

Distinctive Earlier Neolithic artefacts from Scilly include Hembury Ware pottery, two polished stone axes from Bryher and Gugh (Clough and Cummins 1988, Hencken 1932) and a small number of unprovenanced leaf-shaped arrowheads. Hembury pottery is characterised in the south-west by a series of round bottomed bowls, many of which have distinctive horizontally pierced and flared lugs (Mercer 1986a). This pottery is dated at Carn Brea, a hilltop enclosure near Camborne, Cornwall, to the 4th millennium BC 3496-3098 cal BC, (BM-823; 4561 ± 47 BP); 3639-3356 cal BC (BM-824; 4697 ± 60 BP); 3960-3650 cal BC (BM-825; 4999 ± 64 BP) (Mercer 1981). Other radiocarbon dates from Hembury, Devon, and Maiden Castle Dorset, confirm an early 4th millennium date for this pottery in south-west Britain 3900-3700 cal BC (BM-2450; 5020 ± 50 BP); 3700-3500 cal BC (BM-2451; 4860 ± 70 BP) (Mercer 1986a, Sharples 1991).

On Scilly, Hembury Ware is found at six locations: Annet, East Porth, Old Quay, Bonfire Carn, North Hill Samson and Bant's Carn. At East Porth, Samson, Neal and Butcher discovered sherds of Hembury Ware placed within a series of pits dug into the natural rab subsoil (Thomas 1985, 102, fig.42, no.23). No published account of this excavations exists but a draft report indicates that the pottery was solely Neolithic and represented a deliberate primary deposit (Cornwall Sites and Monuments Record PRN 7071.01). At Old Quay, St Martin's, Hembury Ware has regularly been found eroding from an old land surface visible in the ram cliff- face. During monitoring work at this site in 1994 the source of this material was identified as a small pit cut into the ancient land surface containing further substantial sherds of Hembury Ware (Ratcliffe 1994).

Further pottery has been discovered within the cliff face at Bonfire Carn, immediately below a Later Bronze Age house (Quinell in Ratcliffe and Stralker 1996, 80-81). The pottery from this site is represented by a number of body sherds of typical Hembury Ware character, including a flat topped lug with a slight groove along its interior which represents one of the distinctive forms of Neolithic lug in the Hembury Ware assemblage at Carn Brea (Mercer 1981).

A few further sherds of Hembury ware were identified in 2002 during my research within the Isles of Scilly museum. These sherds are derived from a large shell midden on Annett (Isles of Scilly Museum accession nos. SC 910 and SC 011). The identification of Neolithic material within this midden may be of great significance to future research on the islands as its excavation might provide valuable data on the character and seasonality of Earlier Neolithic occupation on Scilly.

A chronological relationship has been suggested between Hembury pottery and Scillonian entrance graves although the significance of this relationship is unclear (Whittle 1977). No recent excavation of an entrance grave has taken place on Scilly and past excavations have been largely limited to the monument's chambers. In these instances no artefacts assignable to the Earlier Neolithic have been recovered from contexts associated with the use of the monuments (Ashbee 1974). In two instances un-stratified Hembury pottery has been found in association with entrance graves. At North Hill, Samson, Hencken (1933) found a lug from a Hembury ware vessel immediately outside of the monument's entrance, whilst at Bant's Carn, Bonsor recovered Hembury pottery outside of the monument's chamber (Ashbee 1974; Hencken 1932, 1933; Thomas 1985, 102, fig.42,no.1).

It is likely that the presence of this pottery at Bant's Carn and North Hill represents residual material incorporated either accidentally through the continued importance of certain locales or through the intentional curation of older artefacts. Alternatively, the occurrence of Hembury ware at these monuments may result from the reuse and clearing out of the primary contents of the chambers of the monuments. If this later interpretation could be shown to be the case it would force us to look for a origin for the Scillonian entrance grave in the fourth millennium BC, thereby aligning them with similar early chambered cairns found in south-west Scotland (Henshall 1963; 1972; Piggott 1954; Whittle 1977). An early date for at least some entrance graves might be suggested by the presence of disarticulated human remains (the first burial placed within the monuments chamber) sealed beneath the later stone paving of the chamber of Obadiah's Barrow, Gugh (Hencken 1933). Similarly the flaked flint axe placed upon the ancient land surface prior to the construction of Knackyboy Cairn, as previously discussed, might also date to this period, but as this artefact has a long chronology of use in south-west Britain its significance as a *terminus post quem* for the Scillonian entrance grave is limited.

Although an Earlier Neolithic origin for the Scillonian entrance grave should be considered, current data from the islands suggests that the majority of these monuments date to the Late Neolithic. The modern excavation of a Scillonian entrance grave might clarify this chronological conundrum.

5.3.3. Later Neolithic-Early Bronze Age (*c.* 3000-1600 cal BC)

The Late Neolithic/Early Bronze Age on Scilly is marked by the recognition of distinctive burial and ceremonial monuments such as entrance graves (as discussed above), cairns and standing stones and by the use of pottery decorated on their upper halves with comb-impressed and cord-impressed decorations (Fig. 5.1). The adoption of this comb-impressed and cord-impressed pottery and the use of entrance graves sets the prehistoric island communities apart from their mainland counterparts and may be suggestive of the creation of a distinctive island identity during this period.

Mainland pottery forms are largely absent from the islands' during this period; gabbroic pottery is not found and only a couple of sherds of possible beaker pottery have been found (Ashbee 1976c; Quinell 1996). The only link with mainland pottery forms during this period is the presence of a collared urn from Pendrathen (wrongly attributed by Parker Pearson to Normandy Down) made from clay sourced outside of the archipelago (Parker Pearson 1990). On analogy with the now well-established mainland chronological sequence for collared urns, this example may date to between *c.*2000 and 1650 cal BC (Longworth 1984, Tomalin 1988, Parker Pearson 1994).

Apart from the pottery repertoire of the islands other chronologically distinctive artefacts found within the archipelago can be assigned to this period of prehistory, although many of these lack contextual details. Stone artefacts include Late Neolithic and Early Bronze age oblique and barbed and tanged flint arrowheads and fine-stone adzes, mace-heads and battle axes (Clough and Cummins 1988; Hencken 1932; Ransom 1984; Ratcliffe and Sharpe 1991). At Normandy Farm a cache of stone artefacts was found within a farmers field and comprised of a battle axe, mace heads and adzes, whilst at English Island Cairn a dolerite shaft-holed adze (Fig. 5.22) was found, accompanied by an urn, within a natural crevice of a tor (Clough and Cummins 1988; Ransom 1984).

Metalwork of this period is rare on Scilly. Excluding the metalwork from Knackyboy Cairn (already described), other examples include fragments of an Early Bronze Age dagger found at Carron Rocks (Ashbee 1974). Research in the Isles of Scilly Museum revealed that this artefact (like the adze from English Island Cairn) was found within the crevice of a granite tor accompanied by a comb-impressed pot (see Hencken 1932, Pl. VI. No.3). Further metalwork includes two heavy cast bronze armlets found during the demolition of a cairn on Peninnis Head (Ashbee 1974, fig.50; Douch 1963, 139; Hawkins 1952, 96). Whilst direct parallels for these armlets cannot be found, analogy with armlets from both Britain and Ireland suggest an Early Bronze Age date (Butler 1963).

A variety of Scillonian prehistoric burial and ceremonial monuments potentially date to this period, they include entrance graves, cairns, cists and standing stones. The precise dating of these monuments remains unclear and in almost all instances, they appear to have been reused well into the second millennium BC.

Although entrance graves may have their origins in the Earlier Neolithic current evidence suggest that they belong primarily to the third millennium BC. As demonstrated at Knackyboy Cairn, entrance graves were also reuse as burial monuments and ritual foci during the second millennium BC. At Knackyboy Cairn and Obadiah's Barrow the chambers to these monuments were sealed around or before 1200 cal BC.

Few cairns have been excavated on Scilly and it is therefore difficult to construct a chronological sequence for these monuments. Excavations of cairns on North Hill, Samson and at Hillbenigates exposed central stone cists but little datable evidence was derived. At North Hill, Samson the central cist was carefully constructed, held together with mortise and tenon joints, a techniques more akin to woodworking than stone working (Piggott 1941). Two Early Bronze Age bronze armlets were reportedly found within a cairn on Peninnis Head although precise details of the context of this discovery are sketchy. In the absence of independent dating evidence for cairns on Scilly, we must rely upon analogies drawn with similar dated monuments from the Cornish mainland. Cairns in Cornwall date primarily to the early second millennium BC, confirmed by radiocarbon dates from Crig-a-Mennis, Perranzabuloe, and Goonhilly Downs, Lizard of 1946-1694 cal BC (NPL-193; 3515 ± 90 BP) and 2466-1880 cal BC (HAR-4540; 3740 ± 110 BP).

Stone-lined cists are also found on Scilly without covering cairns, as at Old Town, (McKenzie 1965), Content Farm (Ashbee 1954) and Town Lane (Crawford 1928). The dating of these cists is problematic because of limited and poorly documented excavation and the apparent absence of datable finds. On analogy with similar dated monuments on the Cornish mainland, these monuments should belong to the early second millennium BC. A radiocarbon date from a flat cist on Watch Hill, St Stephen-in-Brannel (Harris 1986), provided a date of 1977-1624 cal BC (HAR-654; 3470 ± 70 BP).

Whilst it is not possible to demonstrate a definitive chronological sequence for the burial monuments of this period, I would suggest, (based upon my previous discussion above) that entrance graves are earlier than cairns and cists and belong primarily to the 3rd millennium BC. Whilst all of these monuments appear to have an overlapping chronology the presence of an open chamber within entrance graves and their subsequence multiple internments distinguishes them from the closed chambers and single internments of cairns and cists. The transition from communal to single burial monuments is a defining characteristic of the Late Neolithic of Britain. This transition on Scilly may highlight a genuine chronological change in burial practice although this transition is blurred on the islands by the continued use of at least some entrance graves into the second millennium BC.

Standing stones are found throughout the archipelago but little evidence for their date is available. An excavation at the base of a standing stone on Gugh found no evidence of associated features or finds whilst others on Chapel Down, Gun Hill and Mount Flaggon form the central features of cairns. Without excavation it is not possible to confirm the relationship between these standing stones and their cairns. However, constructionally it is likely that the cairns were formed around already *in situ* standing stones. This would suggest a Early Bronze Age date for these ceremonial monuments in keeping with their proposed chronology from south-west Britain (Barnatt 1982; Burl 1979).

In contrast to the proliferation of monuments on the islands during this period, evidence for contemporary settlement has proved elusive. As argued previously in relation to the Earlier Neolithic, the absence of settlement may be because houses conceptualised as substantial stone or wood built structures did not exist during this period. This interpretation is supported by evidence from elsewhere in Britain showing that Late Neolithic and Early Bronze Age settlement is frequently represented by more ephemeral features such as pits, ditches and open hearths (Brück 1996, 1999b; Darvill and Thomas 1996).

On Scilly a number of early features located beneath later settlements can be related to the Late Neolithic/Early Bronze Age. At Little Bay a stone lined pit was located below the floor of a Middle Bronze Age house. The walls of this house partially over lay this pit and a heath had been constructed directly above it (O'Neil 1983, 52). A radiocarbon date from the hearth provided a date of 2124-1525 cal BC (HAR-4324; 3490 ± 100 BP) suggesting that the pit was an early feature of within this locale. A similar stone lined pit was found beneath a prehistoric house at Perpitch (O'Neil nd.g) although in this instance we do not have any independent evidence for its date.

Rectangular stone lined box hearths are the earliest features of settlements such as English Island Cairn and Nornour. At English Island Cairn a hearth was found beneath the floor of a later house where it was sealed by a thick layer of ash and soil containing substantial quantities of comb-impressed and cord-impressed pottery (O'Neil nd.h, nd.k). At Nornour the earliest features of the settlement comprised of three stone-lined hearths and an arch of post-holes (Butcher 1978). The dating of these early features at Nornour, as previously argued remain unclear, but most likely relate to the late third or early second millennium BC. Evidence for early settlement on Scilly, whilst insubstantial, can be shown to exist. The identification of early settlement has only come to light through the careful excavation of later settlements demonstrating the importance of certain locales within the island landscape for considerable periods of prehistory.

5.3.4 Middle Bronze Age / Late Bronze Age (*c.*1600-600 cal BC)

In contrast to earlier periods of Scillonian prehistory the Middle and Late Bronze Age is characterised by the presence of settlements and land enclosure and by the absence or continuation of older burial practices. This period is further set apart from earlier periods by the adoption of new forms of pottery.

The pottery repertoire of the Scillonian Middle Bronze Age is characterised by a series of large and medium sized plain globular and bucket shaped vessels (Fig.5.1). As previously argued, a large assemblage of this pottery was found at Nornour where it was terminated by radiocarbon dates of: 1487-920 cal BC (HAR-457 2990 ± 100BP) and 1430-1020 cal BC (HAR-460 3020 ± 70BP). The recognition of a plain ware pottery tradition at Nornour, associated with Middle Bronze Age radiocarbon dates, suggests that this assemblage represent a previously unrecognised Middle Bronze Age pottery assemblage. Plain wares have a long standing tradition on the islands occurring in the Early Bronze Age alongside comb-impressed and cord-impressed pottery, and during the Late Bronze Age and Early Iron Age with carinated bowls and shouldered jars. The isolation of a plain ware assemblage, during Periods 1- 5 at Nornour, lacking comb-impressed and cord-impressed pottery, and Late Bronze Age pottery, confirms this assemblages Middle Bronze Age dating.

Similarly, at Porth Killier an assemblage of plain ware pottery was sealed beneath a midden that produced radiocarbon dates of 1600-1265 cal BC (OxA-3648 3170 ± 65BP) and 1369-942 cal BC (OxA-4700 2935 ± 55BP). At Little Bay radiocarbon dates from a series of hearths, which post and ante date an assemblage of plain ware vessels have produced dates of 1735-1132 cal BC (HAR-1715; 3190 ± 110 BP) and 1206-800 cal BC (HAR-1726; 2780 ± 80 BP). This dating suggests that assemblages that comprise of medium to large plain ware pottery are a feature of the Scillonian Middle Bronze Age.

A change in the island's prehistoric pottery occurs around 1100 cal BC when we see the introduction of a wider range of vessel sizes and forms that include the recognition of a series of Later Bronze Age bowls (Butcher 1978, fig.25, nos.12-15). The recognition of Later Bronze Age pottery at Nornour, as already discussed, represents the first evidence for this pottery on Scilly. Through the present characterisation of the Nornour assemblage, it is now possible to identify another such assemblage at West Porth, Samson (Ratcliffe and Stralker 1996). At this site, undecorated Later Bronze Age bowls are present, similar to those identified at Nornour. These forms, many of which have lugs, include: a simple bowl, a carinated bowl, and two shouldered bowls. The rims of these bowls are predominately square or flat topped and often slightly out-turned with their exteriors smoothed or burnished. Barrett, in his study of the Later Bronze Age pottery of southern Britain, identified a plain ware Post-Deverel Rimbury assemblage dating between the 11th and 9th century BC, and a decorated Post-Deverel Rimbury assemblage dating between the 8th and the 5th century BC. The undecorated nature of the West Porth pottery would suggest assignation to Barrett's earlier undecorated group and this would be supported by the presence of lugs that occurs in a plain Post-Deverel-Rimbury assemblage at Dainton, Devon (Quinell 1986). Although the pottery from West Porth represents a small assemblage, unlike Nornour, this pottery is relatively unmixed and represents a single phase of occupation. Two radiocarbon determinations are available from this assemblage. The first taken from charred cereal grain produced a date of 826-410 cal BC (OxA-3650; 2545 ± 65 BP) and a second, taken from charcoal, produced a date of 831-414 cal BC (OxA-

3651; 2570 ± 65 BP). These dates confirm that this layer accumulated or was deposited during the Later Bronze or Early Iron Age.

Other chronologically distinctive artefacts from this period include a gold bracelet found on Par Beach, St Martin's and a socketed bronze axe from an unrecorded site on St Mary's (Hencken 1932; Ratcliffe 1998, 7). The bracelet has distinctive expanded terminals that identify it as a Covesea variant; such bracelets date to around 900 cal BC and have a specific European Atlantic distribution (O'Connor 1980). The socketed axe described by Hencken as of Breton origin, is of a type common in Cornwall and can be dated to around 1000 cal BC (Hencken 1932; O'Connor 1980; Pearce 1983).

It is difficult to assign with confidence any of the burial monuments on the islands to this period, but what can be demonstrated is that earlier monuments, such as entrance graves, continued to be used throughout the Middle Bronze Age. Evidence for this burial continuity is demonstrated by the abundance of Deverel-Rimbury style bucket and globular vessels within the final phases of Knackyboy Cairn (Fig.5.1).

It is likely that cairns continued to be constructed and that the large cairnfields located around the periphery of the islands might date to this period. As no excavation has taken place within one of these cairnfields, it is not possible to prove this interpretation. A further method of burial that may be assigned to this period is suggested by Hencken, who hints at the existence of a Bronze Age urnfield when he describes as: "huge quantities of undecorated pots found and subsequently destroyed on the north-western side of Samson Hill, Bryher", he also states that a "further similar cemetery was found by Crawford on St Mary's"(1932, 29). Unfortunately, no further details of these 'urnfields' are available and the character and location of the pottery retrieved is unknown.

Settlements comprising of stone built round houses are found throughout the archipelago. The dating of these settlements is limited to those where excavation has taken place or where distinctive artefacts have been collected from cliff-sections. Radiocarbon dates confirm the Middle and Late Bronze Age date of Scillonian settlement from sites such as:

Bonfire Carn, Little Bay, Nornour, Porth Cressa and Porth Killier (full details of these radiocarbon dates are provided in Appendix 1).

A remarkable series of prehistoric walls are found on Scilly, but their dating is very uncertain and may never be resolved if research is confined to the most damaged fractions in the intertidal zone (Fowler and Thomas 1979; Thomas 1985). At one extreme, there have been claims that these were integrally linked to megalithic tombs (Ashbee 1973, 1982a) whilst at the opposite end of the sequence they seem to be closely bound into the field pattern of Later Bronze Age an Iron Age settlement. If their interpretation is to be refined, it may be necessary to work on the well-preserved sections found on dry land such as those on the northern slopes of St Martin's.

The relationship between field walls and megalithic tombs will be dealt with in the following chapter; here we will briefly consider evidence for their relationship to settlement. Direct relationships between field walls and settlement can be demonstrated at a number of settlements on Scilly. At Little Bay field walls abutting a house, connect to an extensive field system upon Top Rock Hill, whilst houses within a settlement to the North of Tregarthen's Hill are linked together by a wall that also connects to a settlement within Gimble Porth (Neal 1983). Further field walls were detected abutting houses at Barnaby Lane, Perpitch and Par Beach (O'Neil nd.a, nd.g). On Halangy Down a settlement is linked to an extensive field system that Ashbee has argued represents the oldest feature of this site (Ashbee 1999). In all these instances, the age of these field walls need not date earlier than to the middle of the second millennium and in some instances such as at Gimble Porth are likely much later. The character and dating of these walls will be discussed further elsewhere in this thesis. At this point in our discussion I would like to suggest, that land enclose on Scilly did not begin until the Middle Bronze Age and that once this pattern of enclosure was set out it continued into later periods of prehistory.

5.3.5 Iron Age (700 cal BC-AD43)

Settlement and land enclosure founded in the Bronze Age continued into this period whilst new forms of burial practices emerged during later Iron Age. Although much of the coarse ware pottery associated with the Bronze Age on Scilly continues in use in the Iron Age, the Iron Age of Scilly is marked by the emergence of new distinctive pottery. These new forms have close affinities with the Iron Age pottery of Cornwall and therefore can be fitted into the now well-established mainland sequence (Quinell 1986). The Iron Age on Scilly can be sub-divided into an earlier (700-300 cal BC) and a later period (400 cal BC- cal AD 43) (Quinell 1986).

The Earlier Iron Age pottery of Scilly shares many of the attributes of the later Bronze Age in the occurrence of carinated bowls and shouldered jars. Early Iron Age pottery has been found at settlement sites such as Nornour, Halangy Porth, Halangy Down, Little Arthur and Lawrence Brow (Ashbee 1983, 1999; Butcher 1978 O'Neal nd.f, nd.l). Distinctive forms of this pottery include sharply carinated bowls with flaring rims as found at Nornour and a series of shouldered jars decorated with fingertip impressions below their rims (Fig. 5.17, no.64; Butcher 1978, fig.24, nos.1-4 and fig.25, no.19). Similar pottery has been found at the Late Bronze Age / Early Iron Age sites of Bodrify (Dudley 1956) and Kynance (Thomas 1960) in Cornwall and at Maiden Castle, Dorset (Sharples 1991, 109, fig. 84). At the settlement of Halangy Porth this pottery has been found in association with radiocarbon dates of 400-174 cal BC, (OxA-4696; 2250 ± 50 BP) 760-385 cal BC (OxA- 4697; 2390 ± 50 BP), produced from charcoal taken from a hearth within a house (Ratcliffe and Stralker 1996). From a second house at Halangy Porth a series of large, shouldered vessels with flared rims have been found (Ashbee 1983, fig.9, nos.1-3). These vessels were found within occupation layers from inside the house, which produced a radiocarbon date of 518-60 cal BC (HAR-1313; 2260 ± 90 BP) (Ashbee 1983b). These vessels have counterparts in the Cornish Iron Age, being found at St Mawgan-in-Pydar (Threipland 1956, 58), Trevisker (ApSimon and Greenfield 1972, 335) and Carn Euny (Christie 1978, 407).

The later Iron Age on Scilly is represented by a number of distinctive vessel forms that fall within the categories of what have formally been known as South-Western Second B (also referred to as Glastonbury Ware) and South-Western C. The name South-Western Decorated is now used to describe the former; the latter on Scilly is represented by pottery known as Cordoned Ware (Cunliffe 1991). South-Western Decorated vessels are smaller than preceding types and tend to be better made. The most common occurring form on

Scilly is a necked jar, which is often decorated with zones of incised geometric or curvilinear patterns on the shoulder (Dudley 1967). This pottery occurs throughout Cornwall and Devon and is generally assigned to the second and first centuries BC (Quinell 1986). Recent detailed study of South-Western Decorated Pottery, based on material from Castle Dore, Carn Euny and Trevelgue, have done much to improve our understanding of its chronology (Avery 1972; Christie 1978; Quinell 1986). At Carn Euny, it is associated with a radiocarbon date of 762-233 cal BC (HAR-238; 2370 ± 70 BP). A series of radiocarbon dates from Killibury Hillfort, Egloshale (Miles 1977), has demonstrated that South-Western Decorated pottery was fully developed by the third century BC and continued in use well into the first century BC, 396-4 cal BC (HAR-1950; 2180 ± 70 BP), 397-46 cal BC (HAR-1953; 2110 ± 70 BP), 400-53 cal BC (HAR-745; 2180 ± 70 BP). Peacock (1968,1969) has shown that nearly all South-Western Decorated pottery in Cornwall is made from the gabbroic clays of the Lizard. On Scilly, the nature of such pottery is yet to be studied in detail but a Cornish origin would seem likely. No radiocarbon dates are associated with South-Western Decorated pottery on Scilly but this pottery has been located at Poynter's Garden, St (Ashbee 1974), Halangy Down (Ashbee 1999), Little Arthur (O'Neil nd.f), Nornour, (Dudley 1967), and Cliff Fields (Ratcliffe and Sharples 1991).

Cordoned Ware appears during the first century BC, the fullest published range of this pottery being that from St Mawgan-in-Pydar (Threipland 1956) and that from Carvossa, Probus (Douch and Beard 1970). Thomas has suggested a Breton origin for Cordoned Ware in Cornwall (1960), a point developed by Cunliffe (1982, 50, 1983,125) who has demonstrated that imported Cordoned Wares at Hengistbury Head and Mount Batten, in Dorset can be dated to the years immediately preceding Caesar's conquest of Gaul. Cordoned Ware in Cornwall and Scilly tends to be thinner and better made than earlier pottery, an improvement that has been attributed to the introduction of the potters' wheel. However, Quinell in her recent review of Cornish Iron Age pottery was unable to identify any convincing examples of wheel-thrown Cordoned Ware pottery (Quinell 1986, 121). On most Cornish sites, it has not proved possible to stratigraphically separate Cordoned Ware from South-Western Decorated pottery. It is recognised however, that Cordoned Ware, although overlapping with the production of South-Western Decorated pottery is chronologically a later development. Current opinion on the chronology of Cordoned Ware in Cornwall is that it belongs to the first centuries BC / AD (Quinell 1986, 122). On Scilly, Cordoned Ware has been identified at Nornour and Cliff Fields (Butcher 1978, fig.24, nos.9, 10 and 11; Ratcliffe and Sharples 1991).

No evidence for the nature of Scillonian burial practices during the Early Iron Age can be found. This situation is paralleled on the mainland were burials of this period are equally absent from the archaeological record. Whilst it is possible that some of the Scillonian cairnfields continued in use, it is more likely that the burial rite of this period involved the disposal of the dead in a manner that rendered it archaeologically invisible (such as deposition within the sea).

In contrast, during the later Iron Age burials once again become archaeologically visible. These burials take the form of crouched inhumation burials placed within oval or sub-rectangular stone cists. Similar cists have been recorded on the Cornish mainland at Harlyn Bay and Trevone were associated artefacts date them to the later Iron Age (Dudley and Jope 1965; Trollope 1960, 312; Whimster 1977, 1981; Whitley 1902). On Scilly, these cists, known as Porth Cressa cists, have traditionally been attributed to the Romano-British period because of a series of brooches recovered from a cist cemetery at Parson's Field (Ashbee 1954, 1974). Recent discoveries on the islands have forced a reconsideration of the dating of the Porth Cressa cist.

A Porth Cressa cist discovered at Hillside Farm (Fig.5.23) contained an exceptional and chronologically discreet array of Later Iron Age artefacts including: a La Tène II sword and scabbard, a bronze mirror, the bronze bindings from a 'hide shaped' wooden shield, a Nauheim variant brooch, a bronze spiral ring and an unusual object made from tin (Johns pers.com; CAU 2000). The Later Iron Age dating of this Porth Cressa cist has been further confirmed by a radiocarbon date range of 200-45 cal BC (OxA-12095 and OxA-10255 combined weighted mean of 2098 ± 21 BP). Comparisons between the artefacts from Hillside Farm with those from other Porth Cressa cists suggest that many of these also date to the later Iron Age. Later Iron Age artefacts found within these cists include: a spiral ring and South-Western Decorated bowl from Parson's Field and a Nauheim variant brooch from Old Man (Ashbee 1974, fig. 57, 1983b; Tebutt 1934). In conclusion, the Porth Cressa cist type, like it's Cornish counterpart, appears to have developed during the Later Iron Age but continued in use on Scilly into the Romano British period.

Iron Age settlement on Scilly, as demonstrated at settlements such as Nornour, appears to have continued uninterrupted from the Bronze Age with settlement locales reused throughout the period. This important aspect of Scillonian settlement will be discussed in the next chapter. The dating of Iron Age settlements on the islands can be confirmed through pottery assemblages from sites such as Nornour, Dial Rocks, Point of Fields, Halangy Porth and Halangy Down and by a small number of radiocarbon dates. Iron Age radiocarbon determinations are currently available from three houses on Scilly, two at Halangy Porth and a third at West Porth (Ashbee 1983a; Ratcliffe and Stralker 1996). The first house at Halangy Porth produced two dates: 400-174 cal BC (OxA-4696; 2250 ± 50 BP) and 760-385 cal BC (OxA-4697; 2390 ± 50 BP) whilst the second house produced a single date of: 518-60 cal BC (HAR-1313; 2260 ± 90 BP). At West Porth two further Iron Age radiocarbon dates have been produced from a single house, they are: 826-410 cal BC (OxA-3650; 2545 ± 65 BP) and 831-414 cal BC (OxA-3651; 2570 ± 65 BP). Full details of theses radiocarbon dates and their contexts are given in Appendix 1.

The pattern of Bronze Age land enclosure appears to continue during the Iron Age. At Bar Point a radiocarbon date taken from a ditch running alongside an ancient field wall produced a date of: 385 cal BC-cal AD 17 (HAR-3483 2140 ± 70 BP) demonstrating that these fields were still in use by the Later Iron Age.

Hillforts and cliff castles have traditionally marked the beginning of a local Iron Age in Cornwall. Whilst hillforts do not occur on Scilly two cliff-castles have been identified. The first, known as the Giant's Castle, is located at the bottom of Salakee Down and the second on Shipman's Head. At Shipman Head, the cliff castle is located on the northern extremity of Bryher, and is comprised of a substantial stone rampart, that separates the rocky promontory of Shipman's Head from the rest of the island. At the Giant's Castle four curvilinear stone and earth banks cuts off a rocky promontory from the rest of Salakee Down. Excavation of the west end of the outer rampart at the Giant's Castle, before the construction of a World War II lookout, produced duck-ornamented pottery. This pottery can be dated to around 300 cal BC (Hencken 1932; Harding 1974; Elsdon 1989; Gibson and Woods 1990).

Although it has been assumed, that cliff castles were primarily constructed as settlements or as defensive stockades, no traces of huts or other structures have been detected within either of these cliff castles. A similar scenario was noted by Herring in his review of Cornish cliff-castles that led him to conclude that they represent neither enclosed settlements or defended structures (Herring 1994). Excavations at the cliff castles of Maen Castle and Treryn Dinas in West Penwith both produced Early Iron Age pottery. At Treryn Dinas, this pottery was found below a repaired section of one of the outer ramparts, suggesting a Late Bronze or Early Iron Age date for this monument (Herring 1994). Although no excavation of a cliff-castle has been carried out on Scilly, it is assumed that these sites, in line with their mainland counterparts emerged during the first millennium BC.

5.4 Conclusion

The absence of a chronological framework for Scillonian prehistory has caused confusion within the archaeological literature resulting in poor chronological resolution. This chapter has demonstrated that it is possible to produce a framework through which to consider Scillonian prehistory, by: reassessing past excavations and reconsidering museum archives and collections, and by considering pottery sequences and radiocarbon dates. It is acknowledged that the proposed framework presented here remains problematic and that many questions remain to be addressed. Many questions such as the dating of cairnfields can only be resolved through further fieldwork and excavation whilst others such as the isolation of Mesolithic flint work requires the attention of a lithics specialist. This chapter represents a first attempt to come to grips with the prehistoric chronology of the archipelago. Through the realisation of this framework we can now move on to a detailed and chronologically informed analysis of prehistoric Scillonian settlement, monuments and material culture.

6. PREHISTORIC SETTLEMENT AND THE ISLAND LANDSCAPE

Settlements are frequently conceptualised as distinctive, bounded categories of space readily distinguishable from the landscape around them. However, the term settlement is more ambiguous and complex than it first appears. Brück provides a definition of settlement that emphasis the importance of the process of 'settling' and defines settlement as "the creation of place through culturally specific sets of activities relating individuals and groups to landscapes and to each other within those landscapes" (1999b, 145). The important point to this definition is that settlement and landscape cannot be divorced from one another, and that the character of individual sites can only be fully understood through reference to their landscape context. This chapter will argue that prehistoric settlement can only be understood, firstly, if interpreted within the context of the island landscape and secondly, by focussing attention upon the generations of islanders who lived through these island landscapes.

Analysis in this chapter will focus upon both macro and microelements of settlements, from their distribution within the island landscape to the deposition of artefacts within individual houses. In the first section, I will begin by exploring the distribution and settings of prehistoric settlement, its association with natural features of the island landscape. We will then look at the configuration and construction of prehistoric houses and settlements. Particular attention here will be given to the orientation of doorways and the internal organisation of house interiors. Finally, we will consider house abandonment and structured deposition within houses and settlements.

6. 1 The character and chronology of Scillonian settlement

6.1.1 Identifying prehistoric settlement on Scilly

Evidence for the structural remains of Mesolithic and Neolithic settlement on Scilly, in common with elsewhere in Britain, is largely absent. It may be argued that early settlement on the islands was restricted to the coastline and has subsequently been lost through inundation. Whilst this scenario, especially in relation to the Mesolithic, is plausible, the magnitude of sea-level change on Scilly is less than previously assumed (see Chapter 4). A number of large shell middens, such as upon Annet, have produced early artefacts and the excavation of one of these may provide valuable information on Mesolithic and Neolithic occupation of the archipelago.

The shortage of evidence for Neolithic settlement stands in dramatic contrast to the number of burial monuments that belong to this period. This absence of houses might result from their destruction or masking beneath later settlements. This interpretation is based upon the consistent occurrence of early artefacts and features such as post-holes and pits below the house floors and walls of later houses (Butcher 1978; Neal 1983; O'Neil nd.g; Quinell in Ratcliffe and Stralker 1996, 91). Although these factors may have contributed to the archaeological invisibility of early settlement, they cannot fully account for this paucity. It is more likely that our failure to recognise evidence for settlement results from the alternative ways that Mesolithic and Neolithic communities lived through and perceiving the island landscape. To these islanders, identification with place may have been linked to territories and movement across land and sea rather than to the formal binding of space through the built environment. Because of the lack of quantifiable data for Mesolithic and Neolithic settlement on Scilly, discussion within this chapter will focus primarily upon the structural remains of settlements that date predominantly to the second and first millenniums BC.

My settlement database for Scilly comprise 121 prehistoric houses, the majority of which have not been excavated and can only be approximately dated. A list of dated houses and the basis for this dating is shown in Fig 6.1. A full list of prehistoric Scillonian houses is given in Appendix D.

Prehistoric settlements on Scilly comprise of small groups of circular and oval shaped stone houses. In Chapter 4, it was demonstrated, through an analysis of palaeo-environmental data (Pollen, plant macro-fossils and animal bones), that prehistoric houses on Scilly were occupied throughout the year through the exploitation of a mixture of sea and land based resources (Fig.4.17-4.25; See also Ratcliffe and Stralker 1996).

The identification and interpretation of houses is frequently problematic, especially when they occur within the present day intertidal zone, were movements of sand, gravel and beach boulders obscure them. Equally, houses identified in present day cliff-sections are difficult to interpret because of their limited exposure and constant erosion. The character of several present day intertidal and cliff exposed sites has been confirmed through survey and excavation, but the interpretation of others remain questionable (Ashbee 1983; Gray 1972; Ratcliffe and Stralker 1996, 87; Thomas 1985). At Bar Point, Ashbee reclassified two round houses (identified by Thomas 1975, 91, fig. 41) as "fortunate arrangements of natural boulders" (Ashbee 1978, 134), whilst at Pendrathen and Appletree Point houses located within the present day intertidal zone are only periodically exposed (Fowler and Thomas 1979). Similarly, three houses on Par Beach (identified by O'Neil) are shrouded beneath sand and have not been exposed since the 1950s (Butcher pers com; Ashbee 1974).

6.1.2 The character of prehistoric settlement

Single houses are rare and many of these are shown on further investigation to form part of larger house groups. For example, in 1936 Gray (1972, 43) detected the remains of a single house within a rab cliff at Porth Killier but when this site was revisited and recorded in 1985 it proved to comprise of not one, but three houses (Ratcliffe and Stralker 1996, 125). Subsequently, geophysical survey has shown that this settlement is more substantial than previously thought, extending inland for a further 20m (Ratcliffe 1989, 10).

Similarly, at Halangy Porth a single house exposed in the cliff-section is now shown to be at least two houses (Ashbee 1984; Ratcliffe and Stralker 1996). At Little Bay, what O'Neil identified as a single house was shown on subsequent excavation to be a group of at least four houses (Neal 1983). Similar scenarios are also recorded at other sites on the islands' such as English Island Carn, Halangy Down and Nornour where in each instance what was initially interpreted as single houses have consequently been shown to comprise more substantial settlements (Ashbee 1999; Butcher 1978; Neal 1986; Ratcliffe 1990).

What is significant from the examples above is that prehistoric settlement is characterised by groups or clusters of houses. Single houses do occur, but in each case, their location, in the intertidal zone, exposed in cliff section or beneath modern development, makes it difficult to verify whether these are also associated with the fragmentary remains of further houses. These sites comprise:

- Appletree Point (Fig. 6.2, no.30): A single house located amongst boulders within the present day intertidal zone of Tresco (Ratcliffe and Stralker 1996). This site could not be located during my fieldwork in 2002, although field boundaries associated with the site were detected on the boulder beach. The transitory nature of intertidal sites requires caution in their interpretation as other similar sites such as Pendrathen and Samson Flats have proven through consistent monitoring to comprise of small house clusters. Evidence for further houses at Appletree Bay may be suggested by occupation material, such as pottery, quern stones and a stone basin, found exposed in a nearby cliff-section (Ratcliffe and Thorpe 1991, 50).

- Carn Leh (Fig. 6.2, no.16): This site was discovered on the south-western slope of Old Town Bay adjacent to the impressive tor of Carn Leh (English Heritage 1999) Today, this house platform is located within an area of impenetrable vegetation next to a rab cliff-face. It is possible that further houses may exist within this vegetation or that others have been destroyed by coastal erosion.

- Carn Windlass (Fig. 6.2, no.1): A single house located next to the tor of Carn Windlass on the exposed west coast of Annet (English Heritage 1999). The character and location of this house is markedly different from other houses on Scilly and will be considered separately below.

- Garrison (Fig. 6.2, no.12): Part of a stone roundhouse exposed during the excavation of a Porth Cressa cist cemetery at Parson's Field (Dudley 1960-61, 222, fig.26). Excavation at this site was limited to a small area where house foundations were being dug; here the remains of a stone wall and midden containing prehistoric and Romano-British pottery were found. It is likely that these fragmentary remains represent part of a settlement located on the eastern slopes of Garrison Hill, now beneath the modern settlement of Hugh Town.

- Porth Mellon (Fig. 6.2 no.15): This site was recorded in 1990 when it became exposed by winter storms, it is comprised of a single house associated with boulder walls within the present day intertidal zone of Porth Mellon (Ratcliffe and Stralker 1996, 24). Because of the depth of sand covering this site the possibility of further houses should be considered.

- Porth Minnick (Fig. 6.2, no.17): A single house located towards the bottom of the southern slopes of Salakee Down and close to the tor of Inner Blue Carn (English Heritage 1999). Although this house appears to be isolated, a civil war battery located adjacent to the site may have been constructed within the remains of a further house.

- Porth Morran, (Fig. 6.2, no.43): A single house located in the present day intertidal zone of Porth Morran, between White Island and St Martin's (Fowler and Thomas 1978, Pl XVIIIa). A second house now shrouded by sand is allegedly located within Porth Morran although its presence cannot be confirmed (Ratcliffe 1986).

- West Porth (Fig. 6.2, no.11): A cliff-face site on the west coast of North Hill, Samson (Ratcliffe and Stralker 1996, 82). Only one house can be detected in the cliff-face but the pottery associated with this house spans two millennia, much of which derives from redeposited rab that may be from a further, yet un-located, house.

What is demonstrated in these examples is that whilst single houses occur the prehistoric settlement database of the islands' is characterised by groups of houses.

6.2 Locales of settlement and the lifecycles of houses

The above discussion has argued that the prehistoric settlement database for Scilly is characterised by clusters of houses that form small spatially discrete farmsteads or fishing settlements. We will now develop this discussion to explore whether these settlements comprise houses occupied simultaneously or sequences of single houses. This analysis will necessarily be limited to houses where excavation has been carried out and accurately documented.

6.2.1 The lifecycles of prehistoric settlements

In order to address this problem, let us first reconsider the constructional sequence from Nornour. The constructional sequence (see Chapter 5) demonstrates that the eastern settlement area comprised of a sequence of eight houses, but that no more than one or two were occupied simultaneously. It was shown that when houses came to the end of their lives they were replaced by the construction of new houses, frequently built adjacent too or partially overlying the earlier (Fig.5.2).

These new houses were intentionally constructed within the substantial upstanding remains of older houses, which would have continued to be visible. Houses at Nornour were not only placed in close association to the upstanding remains of older dwellings but also to more ephemeral remains of earlier occupation, such as pits, hearths and post-holes. For example, House 10 at Nornour was built overlying an arc of post-holes and hearths, located below later houses and deposits (Butcher 1978, 36, fig.8). Similarly, in the western settlement area post holes and cut features occur stratigraphically below the earliest occupation levels (Butcher 1978, 47-48, 51-56). The pattern of construction at Nornour suggests that later houses were intentionally constructed to reference earlier occupation of the site, thereby building links with previous generations of householders.

When we look at other prehistoric settlements within the archipelago a similar picture to that identified from Nornour emerges. Settlements are located within particular locales and these are reused over long periods, with houses occupied, abandoned, modified and reoccupied within relatively short periods. For example, at Halangy Down and Halangy Porth, settlement spanned a period of approximately two millennia. Settlement on Halangy Down dates from the Iron Age and Romano-British period, whilst the nearby settlement of Halangy Porth was thought to date to the Bronze Age (Ashbee 1974). In Chapter 4, it was demonstrated that settlement within this locale was located on the south-western coastline of a large bay that stretched in an arc between Bar Point and Samson (Fig.6.2). It was previously assumed that settlement from Halangy Porth moved away from the shoreline and was re-established up the hill-slope at Halangy Down because of the encroachment of wind blown sand brought about through rising sea-levels (Ashbee 1976d). My recalibration of available radiocarbon dates (using CALIB v4.1) and reconsideration of artefacts from these sites show this interpretation to be unsound. What this analysis suggests is that both settlements are contemporary, spanning both the second and first millennium BC. These sites should be reconsidered, in light of these findings, as elements of a single settlement, that developed through a process of rebuilding and modification on the coastal hillside of the Down (Ashbee 1999, fig.4).

The constructional sequence, revealed at Halangy Down and Halangy Porth share many similarities to that identified at Nornour. Houses here were occupied sequentially, constantly modified and built amidst the remains of older dwellings (Ashbee 1999, 30-61; Ratcliffe and Stralker 1996). The constructional sequence from Halangy Down demonstrates that houses were constantly modified through the construction of annexes and courtyards. This sequence is terminated by the construction of what Ashbee interprets as a Romano-British courtyard house (Ashbee 1999, fig.17). Whilst the late date of this house is not in question, its final form could be interpreted alternatively as the last phase of a process of aggregated house construction over the previous two millennia. This is not to argue that house forms within this settlement remained constant throughout prehistory, but rather that house form was determined by the continued significance of specific locales and that the final constructional form of houses was partially determined by being intentional placed amidst the substantial upstanding remains of older dwellings. In other words house form and construction was at least partially determined and structured by the material actions of older generations of islanders.

The excavation of a settlement of four houses at Little Bay suggests that, here also, houses were not occupied simultaneously but constructed, modified, abandoned and rebuilt (Neal 1983, 58). For example, radiocarbon dates from a sequence of internal hearths in house B at Little Bay demonstrates occupation between 2124-1525 cal BC (HAR-4324; 3490 ± 100 BP) and 1206-800 cal BC (HAR-1726; 2780 ± 80 BP) separated by episodes of abandonment and modification, evidenced by infilling layers comprised of soil, rubble, midden and broken artefacts (*ibid.* 52-56).

As noted at Nornour, houses elsewhere were also constructed upon the remains of earlier ephemeral remains of occupation, such as over stone-lined pits (Neal 1983, figs. 5 and 6c; O'Neil nd.g). At Little Bay, a radiocarbon date from a hearth that stratigraphically seals a pit provides a *terminus ante quem* of 2124-1525 cal BC (HAR-4324; 3490 ± 100 BP) for the filling in and levelling of this feature. At Perpitch, O'Neil was able to demonstrate stratigraphically that an underlying pit was backfilled and levelled before the construction of the house (O'Neil nd.g), whilst at English Island Carn a house was constructed on top of an earlier occupation that comprised a small sanded area and hearth (O'Neil nd.f).

At Dial Rocks, Little Arthur, May's Hill and Porth Killier, a similar scenario of house abandonment and reoccupation is suggested from the chronologically mixed assemblages recovered (O'Neil nd.d, nd.f; Ratcliffe and Thorpe 1990; Ratcliffe and Stralker 1996). For example artefacts recovered from houses at Dial Rocks contain artefacts dating from the second millennium BC to the first century AD, whilst at Little Arthur a mixed assemblage of first and second millennium BC pottery is associated with a house that was constantly modified and rebuilt (O'Neil nd.f; Ratcliffe and Thorpe 1991).

6.2.2 The death of the house

These constructional sequences demonstrate that houses followed a lifecycle through which they were constructed, occupied and then abandoned over relatively short periods of time (this lifecycle and associated episodes of deposition will be discussed elsewhere in this chapter). At Nornour the life-span of individual houses is unlikely to have been determined by their structural integrity, as the massive dry stonewalls that comprise these houses, if maintained, could have survived for an indefinite period of time. The life-span of these houses must therefore be determined by social factors relating to the lifecycle of the household. Unfortunately, the archaeological data from Nornour is not sufficiently chronologically refined to determine the precise length of their lifecycle. What we do know is that the settlement (both western and eastern areas combined) spanned a period of approximately two millennia, was comprised of approximately thirteen house sequences with no more than one or two houses occupied simultaneously (Butcher 1978). This timescale would suggest that the lifecycle of a house is unlikely to be linked directly to a single human life-span but may relate to that of a particular resident kinship group or family.

Anthropological studies suggest that the death of a house and its subsequent abandonment may be instigated by the death of key members of a household, a time when previously accepted social structures and allegiances require reconfirmation and renegotiation (Carsten 1997). At this time, family and group seniority and land and sea tenure be contested (Cordell 1989). The construction of a new house, within the remains of the old, may physically mark the successful negotiation of new social allegiances. Similarly, the lifecycle of settlements may have mirrored the lives of their occupants, expanding and contracting according to the needs of the household (Brück 1996, 1999b). Carsten (1997) demonstrates the important role that children play within the houses of Malay fishing communities. Here a house without children is thought to have died, abandoned by the spirit of the house. As result of this belief, older members of the community, or those without children, take in the children of family and neighbours so that the spirit of their homes remains alive. When no children live within a house, it is thought that the spirit of the house will abandon it and that the house will die (Carsten 1997, 81). The important point that Carsten makes is that the life span of a house is primarily related to social factors such as the size, age and composition of the household.

6.2.3 Locales of settlement

I will argue that settlements occur within particular island locales and that these locales were reused over considerable periods of prehistory. So far, this pattern of settlement has been discussed only in reference to excavated sites, but can also be demonstrated at sites where no or limited excavation has been carried out. In these instances, the clustering of houses within particular island locales demonstrates an important link between settlement and place.

One such concentration is found between Pendrathen Quay and Little Porth on St Mary's, where numerous stone built houses and field boundaries have been discovered (Fig.6.2, nos.20 to 22). In Chapter 4, I demonstrated that during prehistory this locale was located on the southern shoreline of an extensive bay that stretched, in an arc, from Innisidgen, St Mary's to the Eastern Isles (Fig.4.12). At Pendrathen, stone houses and field boundaries are identified within the cliff section and from the present day intertidal zone (Evans 1984; Fowler and Thomas 1979; Gray 1972). At Bar Point and Little Porth, houses and an extensive field system are blanketed beneath sand dunes (Ashbee 1978, 1999; Thomas 1977; Evans 1984). Other features suggestive of extensive settlement include, stone remains visible within the cliff-face at Pendrathen, which include drains and walls. The interpretation of these stone features as evidence for settlement is given weight through their association with finds of quern stones and substantial quantities of prehistoric pottery, including a Middle Bronze Age bucket-shaped storage vessel (Samuel 1974). In the absence of detailed excavation, the constructional and chronological relationship between individual houses and between houses and field systems is unclear. Preliminary dating of this site comes from the analysis of artefacts (recovered from: excavation and erosion of the cliff face) and from a single radiocarbon date, (taken from a ditch that ran along the side of a prehistoric field boundary (HAR-3483; 2140 ± 70 BP) 385cal BC -cal AD -17). These dates suggest settlement here spanned a period from the second millennium BC to the first century BC (Ashbee 1999; Thomas 1975; Evans 1984).

Another area of the islands with a concentration of prehistoric settlement is along the north-west coastline of St Martin's, between Top Rock Hill and Turfy Hill (Fig. 6.2, nos. 39 to 43). In Chapter 4, it was shown that this locale was situated upon the northern coastline of St Martin's (Fig.4.12). On the eastern slope of Top Rock Hill, a single house is found levelled into the gradient of the hill, whilst at the bottom of the slope a group of four houses occur in Little Bay. Further evidence for settlement in the immediate area is suggested on the northern slope of this Hill in Top Rock Valley, where the remains of field boundaries and further houses can be traced within the dense undergrowth. Similarly, close by in Porth Morran a single house occurs, whilst to the south-east two further houses are found within Great Bay (Fowler and Thomas 1979; O'Neil nd.k). This scattered settlement is confined to the north-west slopes of St Martin's located along the sandy bays of Little and Great Bay. The area forms a natural harbour of sandy beaches that drop off quickly into the open sea, forming a distinctive setting enclosed on three sides by hills and open on the fourth to the sea. These clusters of houses, arranged along the coastline, are linked to what appears to be a rectilinear field system. This field system only exists in fragments and is covered by impenetrable vegetation. By plotting where field walls cut over the multitude of footpaths that criss-cross this part of the island, it is possible to deduce that this field system extends over much of the hill above Little and Great Bay.

Radiocarbon dates recovered from Little Bay suggest that settlement here began during the early second millennium BC ([HAR-4324; 3490 ± 100 BP] 2124-1525 cal BC) and continued into the first millennium BC ([HAR-1726; 2780 ± 80 BP] 1206-800 cal BC), whilst pottery from a house at Great Bay demonstrates an Earlier Iron Age occupation (O'Neil nd.n). What these dates suggest, is that whilst the house clusters that occur within this area of the islands are not necessarily contemporary the importance of this locale as a place of settlement persisted for a considerable period.

The above analysis has argued that the pattern of prehistoric settlement on Scilly consists of small clusters of houses that comprised of houses sequences. This pattern of house construction suggests the importance of continuity. Settlement continuity was expressed by incorporating parts of each successive house into the structure that replaced it. The lives of one generation of islanders would have been profoundly affected by the visible traces of their predecessors, and through the process of house construction and modification, prehistoric Scillonians may have reaffirming bonds between themselves and previous generations of islanders. This process of affirmation may have provided a powerful visible symbol of the legitimacy of a household to occupy a locale and confirmation of their island lineage. The continuity in settlement pattern on Scilly suggests that particular island locales held significance for considerable periods of prehistory. We will now look more closely at these locales in order to explore their relationship to the island landscape.

6.3 The coastal distribution of prehistoric settlement

The configuration of the ancient coastline of Scilly has been explored in Chapter 4 (Fig. 4.12). In this section, I will explore the distribution pattern and landscape placement of prehistoric settlement in relationship to the prehistoric configuration of the archipelago.

6.3.1 Settlement and the ancient coastline

When evidence for prehistoric settlement is plotted onto a map of the islands, a strong coastal distribution can be observed (Fig.6.2). It may be argued that this apparent coastal distribution of prehistoric settlement might result from the destruction of inland sites; however, survey within the islands' interiors has largely failed to locate inland settlement (Ratcliffe 1989; Russell 1980).

This coastal distribution is most clearly demonstrated on St Mary's. Today, large areas of St Mary's is enclosed for agriculture/horticulture and it could be argued that the coastal distribution of settlement, suggested by the archaeological data, is a consequence of the destruction of inland sites. However, the areas of St Mary's most intensively exploited and for the longest time (principally for potato and more recently flower growing), are not within the island's interior, but along the sheltered inner coastline (those areas where settlements have been recorded). In contrast, enclosure within the islands interior (used predominantly for the grazing of livestock) is late and less intrusive. Furthermore, in contrast to the coastline, the interior of St Mary's (and other islands within the archipelago) is not masked by wind-blown sand, and one would therefore expect that evidence of settlement here would be easier to detect. Equally, since the earliest archaeological investigations on Scilly the discovery of sites has relied upon the participation and local knowledge of islanders. In spite of such involvement and local awareness, settlement sites within the island's interior have not been forthcoming. These findings are replicated and confirmed on other islands such as Bryher, St Agnes and Gugh, islands, were only limited land enclosure occurs, and where survey has also largely failed to identify inland settlement. These findings are confirmed by a survey carried out by the Cornwall Archaeological Unit during 1985 (in preparation for providing a mainline electricity supply) that included the digging of trenches across the interior of the inhabited islands. Although numerous prehistoric artefacts were revealed in these excavations, evidence for settlement was not forthcoming (Ratcliffe and Thorpe 1991).

Although the overriding pattern of settlement on Scilly is along the present day coastline, a small number of sites occur within the island's interior. Whilst these sites are not located adjacent to the coastline, they maintain easy access to the sea, frequently placed upon hill slopes overlooking bays such as Par Beach and New Grimsby Porth. These sites include: Barnaby Lane, (Fig.6.2, no.2). North of Tregarthen's Hill (Fig. 6.2,no.33), Dial Rocks (Fig.6.2, no.31), John Batty's Hill (Fig.6.2, no.50) and Top of the Hill (Fig.6.2, no.3).

The above discussion argues that prehistoric settlement is primarily located on the coast where it is clustered within specific island locales. This distribution may suggest that these sites were fishing settlements where access to the sea, safe harbourage and stowage of boats might have been determining factors. Let us know look more closely at the locales in which settlement is found and specifically at their relationship to the ancient Scillonian coastline.

6.3.2 The interpretation of coastal settlement

Chapter 4 demonstrated that within the interior lagoon of the islands we can envisage two large bays, the first, to the east, spanning between Bar Point and Arthur, whilst to the west a second is found between Pendrathen and Samson (Fig.4.12). Similarly, to the north of the archipelago a small bay may once have existed within Tean Sound.

As well as recognizing these bays we can also identify potential landing places. Landing places within the archipelago are here recognized through the exclusion of areas of coastline where the landing of small boats would have been impossible or seriously prohibited. Such places include steep and rocky shorelines and areas of coastline exposed to the prevailing wind, wave surges and strong current races. The resultant map, here compiled, shows that only a limited number of places around the coastline of the islands would provide sheltered landing and harbour (Fig.6.3). When we consider the distribution of settlement in relation to these landing places a correlation can be observed.

One area of particular interest is the high density of settlement around Bar Point and its relationship to the remains of a sandbar linking together St Mary's and islands' to the north of the archipelago. The placement of settlement within this locale provides access across this land bridge and close proximity to the sea within the bays to the east and west. These locales provide an ideal environment for the landing, launching and stowage of boats as well as access to substantial areas of towan and intertidal sandbanks for the hunting of sea birds, the collection of shellfish and the placement of fish traps. Evidence for the presence of substantial areas of intertidal saltmarsh, dunes and towan, and for their importance to prehistoric Scillonians, is demonstrated in the ancient pollen, plant macro fossil and animal bone record (particularly bird bones) outlined in Chapter 4 (Figs. 4.17-4.25)

Smaller coastal inlets would also have occurred between Samson and Bryher and within Tresco Channel (see chapter 4); these also show a strong relationship to settlement patterns (Fig.6.3). Towards the north of the islands, deep-water channels exist in Tean Sound and St Helen's Pool. Within this area, a patchwork landscape of islands, water channels and areas of intertidal sand flats, terminated to the south by sand dunes and towan would have occurred. Here also the pattern of settlement would suggest a close relationship to the coastline. This relationship is repeated at other smaller bays such as Porth Cressa, Old Town, Porth Mellon, Toll's Porth, Porth Conger, Great Bay, Little Bay and Porth Morran. In contrast to the examples above, prehistoric settlement is largely absent from the eastern coastline of Tresco (from Pendle Bay to Gimble Porth) and along the south-western shoreline of St Martin's. (Fig.6.3). In Chapter 4, I argued that these areas of the archipelago were most likely covered in saltmarsh and towans during prehistory (Fig.4.12), therefore, if access to the sea was an important consideration in the location of prehistory settlement, these areas might have been intentionally avoided.

The importance of landing places and safe harbourage would have been central to the day-to-day lives of prehistoric islanders who relied upon the sustenance provided by the sea for their survival. Evidence for the importance of the sea for prehistoric sustenance was shown in Chapter 4, and is illustrated in the large quantities of fish bones (of both inshore and offshore species) found within prehistoric middens (Fig.4.22-4.23). Landing places would also have been deeply symbolic, marking a transition between land and sea. Anthropological and historical studies from around the world show that landing and launching places are frequently invested with supernatural powers requiring the strict observance of taboos to ensure the safety of boats and crews (Astuti 1995; Cocrane and Tolston 2002; Combe 1998; Kettula 2000; Munn 1987). Superstitions associated with harbours and landing places are not only restricted to the past as many taboos are still prevalent today within British fishing ports (Gill 1996).

Landing places are where interaction would occur between islanders and non-islanders, providing locales for cohesion, exchange and conflict. It was from these places that islanders would set to sea, uncertain of safe return, and where landings reunited families and members of the island community. As such landing places would have been highly significant to prehistoric Scillonians as both practical and symbolic resources. The close relationship between settlements and landing places suggests on one hand, that access to the sea and its resources was significant, but also, that like houses, these places had long biographies of use by generations of islanders. These landing places would have been used by the first visitors to the archipelago and by all subsequent generations of islanders. I would suggest the character of these places was fundamental to the selection of settlement locales and that the significance of these places predates the construction of archaeological detectable houses.

6.3.3 The topographical settings of settlement

In order to explore this distribution pattern further fieldwork was carried out to record the topographical settings of prehistoric settlement. The settings of settlements identified have been divided into two principal groups (hill slope and flat ground) and further subdivided into a further seven sub groups (cliff-face, intertidal, adjacent to coast, inland, higher ground, bottom of hill slope and adjacent to tor). The results of this exercise are shown in Fig.6.4

From a total of 121 houses, 71% occur upon hill slopes the majority at the bottom of hills adjacent to the coastline. With the exception of Porth Killier, sites exposed in the coastal cliff-sections are located at the bottom of hill slopes. Sites now located upon the boulder beach of Pendrathen (Fowler and Thomas 1979, 186), would when built have been located at the foot of the northern slopes of Telegraph Hill. These houses are located 30m to the north-west of a rab cliff out of which the remains of further prehistoric features such as drains and walls are eroding (Ashbee 1974; Gray 1972). A contemporary relationship between these sites, today separated in elevation by approximately 5m, may once have existed, the most logical being that both were once sited upon a hill slope now destroyed by the sea, leaving only the standing stone structures upon the beach.

One common aspect of these locales is a preference for location on the leeward side of hills that may relate to pragmatic factors such as providing protection and shelter from the prevailing wind. The interpretation of prehistoric settlement and in particular the orientation of house entrances has been used by archaeologists on the mainland as a functional interpretation of settlement configurations. This functional interpretation has been called into question as archaeologists have increasingly become aware that house setting and orientation might also be determined by social factors (Richards and Parker Pearson 1994b).

Whilst acknowledging the validity of this work I would suggest that the significance of the wind on an offshore island is markedly different to a mainland landscape. The wind is always present on Scilly, prevailing from the south-west where it blows in from the Atlantic unabated by landfall. Gale force winds may occur at any time during the year, but are, overall seasonal with their highest prevalence being between November and April. Meteorological data for the islands averaged out over a 50 year period predict that during the month of March gale force winds will occur on 6.6 days. In contrast, during the month of June gale force winds will only occur on 0.1 days (Brandon 1999, 7). The combination of high wind speeds together with the seasonal nature of their frequency would suggest that if the islands were occupied throughout the year, as was suggested in Chapter 4, the settings, configurations and spatial organisation of settlements and houses might reflect a preference towards sheltered and leeward locations and hence protection from winter storms.

In order to assess the relative exposure of settlements we can adopt a technique used to quantify the relative fetch of a coastline (Baker and Wolff 1987, Little and Kitching 1996). Our concern here is to assess settlement location in relation to the major wind patterns of the islands. This is achieved by drawing wind roses, divided into six equal segments, and to centre these roses upon selected settlement sites on the Scillonian coastline. Each segment of the wind rose is then coloured if a fetch of more than 10km is experienced, with segments left blank representing those sites sheltered from the wind, either by local factors, such as their location on a sheltered hill slope, or by being located on the leeward side of islands.

The results of this analysis demonstrate that the majority of settlements on Scilly are located within topographical locations that provide shelter from the wind, with a preference given to leeward facing hill slopes where settlements face inwards towards the protection of the islands' inner lagoon (Fig. 6.5). Whilst location in relation to exposure was important, minor differences in topography such as settlement sited leeward of large outcrops, can greatly affect their exposure to wind. For example, on Bryher two houses have been sited on the leeward slopes of Heathy Hill, adjacent to large tors, whilst two houses sited on the coastal promontory of Burnt Hill, on the north coast of St Martin's, are sited between two tor-capped hills that provide shelter to an otherwise exposed site. Tors may also be incorporated to provide localised shelter, as at Carn Windlass (see below for discussion) and at North of Tregarthen's Hill, where their close proximity to tors are used as windbreaks.

The western coastline of the archipelago affords little shelter, is ravaged by winter storms and here settlement is largely absent. Lack of settlement along the west coast of Bryher, south and west coast of St Agnes and the Atlantic headlands probably relates to their exposed aspect. Settlement does occur along the eastern coast of St Mary's at Porth Minnick and Tregear's Hill (Fig.6.2, nos. 17 and 24) but unlike the western coastline of the archipelago this coastline remains relatively sheltered.

Whilst explanations such as keeping warm are important for why prehistoric houses are sited and built, we should not loose sight of the fact that the different qualities of the wind and knowledge of how to interpret these would have permeated all aspects of the lives of prehistoric islanders. Gaffin (1986), in a discussion of present day island communities in the Faeroe Isles, notes that islanders possess a highly complex system of classifications to describe the character and direction of the wind. Gaffin shows that knowledge of how to distinguish the subtle differences between winds is a fundamental aspect of what it is to be a Faeroes islander (Gaffin 1987).

Knowledge of the qualities of the wind is also fundamental to seafaring, where a wrong judgement might cause the death of a crew. Within an exposed Atlantic archipelago such as Scilly, such knowledge would be fundamental to the daily life of the islanders; it is therefore not surprising that such attention is given to the placement of settlement in relation to the wind. Whilst it can be argued that settlement distribution and form is structured by the environment and by the need to keep warm, it could also be argued that the metaphorical importance of the wind as both benevolent and malevolent presence may have been sedimented within the social logic behind settlement distribution and form.

The distribution and settings of settlement identified suggests that coastal settlement was the norm with locations offering shelter from the prevailing wind chosen over more exposed locales This relationship was nevertheless always a compromise as the most sheltered locations within the islands, their interiors, were avoided. This pattern of settlement further highlights the importance of the sea and to safe harbourage for the prehistoric island community.

A house on Annet?

On Annet, the most westerly of the inhabitable islands', a single round house occurs on the exposed south-west coastline (Fig.6.2, no.1). The location of this hut circle is at odds with the general pattern of settlement distribution on the islands as it is located on one of the most exposed parts of the archipelago, on an island, set within deep water and exposed to the west and north to the full force of the sea and wind. The house is located next to a large tor known as Carn Windlass that offers protection from the north wind, but the setting of this site adjacent to the western coastline leaves it exposed to prevailing winds from the west and south-west. This house is set apart from other prehistoric houses on Scilly by its form, it is round and constructed of low double faced walling within its eastern quadrant (typical of prehistoric houses on Scilly), however, the north, south and western quadrants are formed by three massive boulders up to 2.5m in height (Fig.6.6). Through the incorporation of these massive boulders it is difficult to imagine how such a structure could have been roofed. Even taking into consideration the added protection offered by their incorporation it is difficult to argue that such a house, located within such an exposed location, could have been habitable throughout the winter. We should question whether this structure really represents a house, or other structure occupied on a seasonal basis.

The longevity of this site is demonstrated through its association with an enormous midden measuring approximately 25m in diameter, from which pottery dating from the fourth to the first millennium BC has been recovered. This midden has not been excavated and therefore no analysis of its contents has been carried out, but from areas exposed by sea and wind erosion, it appears to the author to comprise of shellfish (primarily *Patella vulgarta*). It is acknowledged on Scilly, that although limpets may have provided a reliable food resource in times of need, they were most likely primarily used as ground bait in fishing traps or as line bait for deep-sea and coastal fishing (Ashbee 1999; Townsend 1967; Turk 1971, 1984b). Evidence for shallow and deep-water fishing is found in bone assemblages from many of the islands' settlements (Chapter 4). The rocky coastline around Annet is relatively low lying but is surrounded by deep water; this would allow deep-sea fishing to be carried out with limited technology from the safety of the shore. Annet is situated next to the Western Rocks that today, along with the Northern Rocks and the Eastern Isles, are home to large seal colonies. No evidence can be provided that the present distribution of seal colonies is reflective of their distribution during prehistory, however, as shown in Chapter

4, seals were present within the islands in sizable numbers during prehistory as evidenced in the high proportion of seal bones found within bone assembles (Fig.4.19-4.20). In prehistory we would expect that the distribution of seal colonies would be in opposition to that of human settlement, in that seals would occupy those islands and islets least disturbed by humans. Therefore, a seal colony in the vicinity of Annet would seem likely. Taking these points together - easy access to rich seasonal fishing and sealing areas - one potential interpretation for this structure is of a seasonal hunting camp, with the stone settings of the house representing the stone footings of a temporary makeshift shelter. The location of such a shelter on Annet would have allowed people to inhabit this island for a prolonged period in order to take advantage of seasonal fishing and seal hunting.

This interpretation is complicated by the presence of prehistoric field boundaries on Annet that have, in the past, been taken as evidence for the permanent settlement and agricultural exploitation of this island. These field boundaries cannot be chronologically or structurally linked to any prehistoric site on Annet and occur on both the northern and southern sides of the island. Although only fragmentary remains of these walls exist, it is clear that they do not form a coherent pattern of land enclosure like those encountered on Halangy Down or at Bar Point (Ashbee 1999; Evans 1984). The exposure of Annet to the wind and sea would mitigate the use of these enclosures for the growing of crops but their interpretation as seasonal animal corrals is possible. If we accept this interpretation, we can imagine that animals (most likely sheep) would have been transported by boat to this island where they would have been grazed over the relatively calm summer months. Historical records from Scilly show that up until the end of the 19th century animals were frequently grazed on the smaller islands of the archipelago during the summer months (Gill 1975).

6.3.4 Prehistoric settlement and natural features

In the above discussion, I have inferred that a spatial relationship might exist between settlements and granite tors, suggesting that close proximity provided shelter from the prevailing wind. However, Rapoport warns us that whilst environmental factors are important; house form and setting is always secondary to social determinants (Rapaport 1968). In relation to tors, archaeologists (particularly those working in south-west Britain) have become increasingly aware of their use in prehistory as symbolic resources; incorporated and referenced in the construction and placement of prehistoric monuments and settlements (Bender *et al* 1995a, 1997; Bradley 2000b; Tilley 1996b).

This archaeological research has primarily focussed upon the relationship between tors and monuments with relationships between settlement and tors given little consideration. One notable exception to this trend is Bender, Hamilton and Tilley's (1995a, 1997) work at the Bronze Age settlement of Leskernick, Bodmin Moor. This work demonstrates that houses were intentionally sited and orientated in relation to granite tors and earth-fast grounders. By demonstrating a quantifiable link between natural features of the landscape and the character and form of settlement at Leskernick, Bender *et.al* demonstrate a genealogy, where by granite tors become increasingly incorporated into the built environment, firstly, through the construction of monuments and then through the orientation and configuration of settlement. In light of theses studies, I would like to explore whether relationships can be demonstrated between the distribution and settings of prehistoric Scillonian settlement and granite tors.

Tors occur around the Atlantic coastline of the archipelago, with significant concentrations upon headlands such as Shipman's Head and Peninnis Head. When the distribution of tors is contrasted with the distribution of settlement, we observe that whilst correlations exist, the two distributions are overall markedly different (Fig.6.7). This difference results primarily from settlement being located predominantly along the inner coastlines of the archipelago

Whilst differences in the overall distribution between tors and settlements occur, relationships between tors and settlements can be observed. For example, settlement on Nornour is located below three enormous rock pinnacles that dominate the summit of the island, whilst enormous tors also dominate settlements such as Little Bay and Tol Tuppens. Whilst close proximity between tors and settlement is rare, settlements are found within bays and coastal inlets that have enormous tors on their seaward headlands. These tors are a natural feature of a crenulated coastline and occur throughout the archipelago. Therefore, is the relationship between tors and settlement significant or merely a natural feature of the bays in which settlements occur?

Whilst tors are a natural feature of the islands' coastline they also mark out and emphasis the bays where settlement occur, thus providing highly visible elements of the island landscape. These coastal tors are especially visible from the sea where they mark out entrance into the archipelago and thus locations of safe landing (Brandon 1999, 16). Therefore, coastal tors highlight the location of settlement from the sea and as such draw these locales out beyond the coastline of the islands' into the seascape.

Whilst exploring the relationship between settlement and tors it is worth briefly considering cliff castles. Cliff castles are traditionally considered as evidence for Iron Age settlement, however, cliff castles on Scilly, in common with many on the Cornish mainland, shown no evidence of settlement (Ashbee 1974; Herring 1994; Johnson and Rose 1982). The distribution of these monuments is markedly different to that of prehistoric settlement and their main function appears to be the marking out and emphasising of rocky headlands on the periphery of the archipelago. I will consider the significance of Scillonian cliff castles in Chapter 7.

6.4 The architecture of the prehistoric Scillonian house

The previous sections have explored the macro elements of settlement such as their distribution and setting within the island landscape. I would now like to change the scale of analysis and consider the construction, orientation and internal organisation of prehistoric houses on the islands.

6.4.1 House construction

Our image of how a prehistoric house might have looked is dominated by evidence from Wessex, where post-holed round houses with conical shaped thatched roofs are postulated. Whilst the architectural evidence from many prehistoric houses in Cornwall (and elsewhere in Britain) are contrary to that from Wessex, this image of how a prehistoric house ought to look remains powerful and enduring.

On Scilly, prehistoric houses are constructed from granite blocks laid in courses or set as orthostats. Walls are substantial, measuring between 1-2.5m thick, double-faced and containing a central core of earth and rubble. Houses are frequently terraced into hill slopes or constructed within natural hollows. At Nornour and Little Bay houses have been dug into substantial middens (Butcher 1978; Neal 1983). By digging houses into hill slopes and middens, they are provided with an excellent form of insulation against the wind and with added support for load-bearing walls. This extra support may explain O'Neil's observation that houses at Perpitch, Little Arthur, and English Island Carn, revealed no evidence for outer wall faces (O'Neil nd.f,g,h).

Postholes are largely absent from house interiors and it is not known for certain how they were roofed. At Nornour, house walls remain standing in places to over 2m in height and appear to be corbelled (Dudley 1967). Butcher has suggested that the large amount of fallen stone, found inside houses during excavation at Nornour, might derive from the collapse of corbelled stone roofs (Butcher 1978). Other prehistoric houses have substantial internal partition walls that may have supported cross beams, onto which a roof of stone or turf was constructed. Although some house roofs may have been corbelled, the majority show no evidence for this and we should presume that this method of roofing, if adopted, was restricted to only a small percentage of houses.

At Halangy Porth, the presence of substantial roof supports is suggested by the occurrence of holed and socketed stones located in the centre of houses (Ashbee 1974.104,fig. 8c, 1999, 105, fig.50). These stones are interpreted as post footings that would have allowed roof supports to be erected without the need to dig postholes. Similar stones occur within courtyard houses in Penwith where they date to the Romano-British period (Quinell 1986). Although desirable, holed or socketed stones are not necessary to form an effective footing for a roof support. However, whilst these modified stones are easy to detect archaeologically, unmodified post pads are difficult to distinguish and might wrongly be interpreted as stone paving. The point here is that the absence of postholes does not mitigate the presence of roof supports, a point that should be borne in mind by future excavators.

A further variation in roof construction is found at English Island Carn, where O'Neil detected postholes within the earthen wall cores of a prehistoric house. These post holes sloped inwards towards the house interior at an angle approximately 45°, suggesting the house had a pitched roof constructed around a central ridgepole (Ashbee 1974; O'Neil 1949a, 1949b, nd.h).

An ethno-historical parallel can be drawn between prehistoric houses on Scilly and the Blackhouses of the Western Isles of Scotland. The walls of Blackhouses are as wide as those found on Scilly and are double faced with an internal earthen core (Fenton 1989, 11). The beams supporting a pitched roof are supported on the inner face of the house walls leaving an outer ledge around the house on which it is easy to walk and from which the roof can be readily replaced or repaired. Watershed from the roof percolates through the core improving its insulating qualities in relation to both cold and wind. In order to regulate the amount of water within the fabric of houses, complex systems of drains are constructed to stop water accumulating within the house interior (Fenton 1989, 11).

Although aware of the dangers of making too much of analogies between historical and prehistoric sites, the analogy with the 'Blackhouse' provides a useful window into the technologies of vernacular stone built houses that might otherwise be overlooked.
Such an analogy suggests:

- Internal posts are not necessary to construct complex roofs.
- The regular maintenance of houses, and particularly their roofs, would have been an essential part of everyday life (especially true in Scilly which is prone to extreme seasonal storms) and that this 'mending' may be detectable within house form.
- Unlike wooden buildings, it is advantageous to allow controlled amounts of water within the stone fabric of a building.
- That stone drains, so common within prehistoric houses within south-west Britain, can be used to effectively regulate the flow of water within house interiors (Christie 1986; Mercer 1970).

6.4.2 The shape and size of Scillonian houses

Initial research, including the study of published house plans and original fieldwork, suggested that the shapes and size of prehistoric Scillonian houses varied considerably. In order to verify these observations further research was carried out including the measurement and description of all upstanding houses. The data collected from this fieldwork, complimented by published data from past excavation and survey, was then analysis in order to explore whether a standardised house plan existed and how variations in house shape and size might relate to house chronologies.

House shape

From an analysis of 82 houses, two basic shapes emerge: round and oval. Round houses occur more frequently accounting for 73% of the sample whilst oval shaped houses account 27% (Fig.6.8). In many instances, the shape of a house was influenced by its relationship to topography For example, at English Island Carn the shape of a house was determined by its location within a natural hollow (Fig.6.8). In this way, the shape of the house is not determined by a set of predetermined ideas of how a house should look but by a process of adaptation to specific locales. In other words, the importance placed upon a locale has determined the form of the house. Similarly, at Little Arthur and South Hill, Samson, the oval shape of houses were determined by the way in which they were terraced into hill slopes. Houses at Halangy Down, Nornour and Little Bay were constructed amidst older dwellings; here the shapes of individual houses were determined and restricted by the available spaces between the ruined remains of older settlement (Fig 5.2).

This analysis suggests that whilst the settlement database demonstrates variability in the shape of prehistoric houses this relates to their location within the landscape rather than to an intentional wish on behalf of the house builders to create a specific ground plan.

House size

A wide range of house sizes occurs on Scilly ranging from around 2 to 12m in diameter; the smallest of which form annexes to larger houses (Fig.5.2). When the relationship between house shape and house size is compared no correlation can be determined with both oval and round occurring throughout the size range (Fig.6.9).

The question that we now need to ask of this data is whether a correlation exists between house size and chronology. The problem here is that only a small percentage of Scillonian houses can be dated with accuracy. In order to explore this relationship further the dates of individual houses have been divided into three chronological groups:

- Houses datable to the second millennium BC.
- Houses datable to the first millennium BC.
- Houses of uncertain prehistoric date.

The dimensions of all three chronological groups of houses have been plotted as a scattergram to identify significant trends within the data (Fig.6.8). The results of this analysis suggest that houses datable to the second millennium BC are restricted in diameter to between 3.3m and 5.6m. In contrast, houses datable to the first millennium BC occur throughout the size range, but with significant numbers of larger houses (between 6m and 12m). These results suggest that on Scilly large houses may be chronologically distinctive. Similarly, we might tentatively assign those un-dated houses, whose diameters exceed 6m, to the first millennium BC. Whilst acknowledging that this analysis is based upon a small sample of dated houses, the results suggest a possible avenue of research that could be pursued when better chronological resolution is available. If this interpretation could be shown to be correct, it might suggest a change in the social structure of the islands prehistoric communities and their relationship to the island landscape, perhaps suggesting changes within the social unit represented by the house and the types of activities carried out within it.

6.4.3 House doorways

One of the most significant features of prehistoric houses is their doorway. As well as providing access to the interior of a house, doorways might also represent symbolic thresholds between different worlds, such as the internal and private world of the family and the public outside world. In this section, we will explore evidence for the presence of doorways within prehistoric houses on Scilly. Discussion here will particularly focus upon the architectural elaboration of doorways and their orientation.

Identifying doorways

House entrances were identified and recorded through fieldwork in conjunction with the examination of published and archival ground plans. Entrances were recorded from 52 prehistoric houses (43% of settlement database). In a few instances where preservation is good, architectural features such as doorposts, thresholds, porches and entrance passages mark house doorways.

The presence of granite doorposts is one of the most defining characteristics of house entrances, and because of their size, they tend to be one of the last remaining upstanding features of prehistoric houses. The setting of doorposts at the entrance of houses provides support to the terminal ends of house walls where the opening of an entrance creates a structural weakness. At sites such as Nornour, Little Bay and English Island Cairn large orthostats and substantial coursed stone pillars are used to define doorways. In these instances, the size of posts is much larger than structurally necessary and emphasise the transitional space of the doorway.

This transitional aspect of house doorways is further emphasises at a number of sites where house interiors are accessed via a passageway, annexe or interlinked house. At Nornour and Little Bay entrance to interiors is gained through paved passageways that measure over 2m in length (Butcher 1978; Neal 1983). Although the precise dating of these entrance passages remains unclear, they do not appear to be chronologically distinctive occurring within the earliest (House 10, phase 1) and latest (final phase of house 1) houses at Nornour.

The incorporation of entrance passages would have seriously limited the amount of light within the house. This aspect of house entrances is particularly apparent at house one at Nornour, where the entrance passage is set at a right angle to that of house two which provides the only source of access (Fig. 6.9). This architectural elaboration emphasises a line of movement and sight and creates a sense of graded space between inside and outside that underlines the significance attached to the act of entering the house (Parker Pearson and Richards 1994b; Hill 1995, 81). In these instances, entrances may represent transitional spaces between the outside and inside world with the passing over the threshold seen as the symbolic transition into another world.

The occurrence of pivot stones from the doorways of excavated houses suggests the presence of substantial hinged wooden doors. At house two, Nornour, pivot stones are located either side of a paved entrance passage which when fitted with doors would have created an effective air trap within the passageway (Fig.6.9). The use of air traps in this way would have been a very effective means to regulate the temperature inside similar to that employed by communities living within the artic circle (Dumond 1987; Rapoport 1969). Door pivots are only identified at four excavated houses and it is not known how many other sites may also have had these features or whether they are chronologically distinctive. At Nornour door pivots occur within house six which has produces a radiocarbon date 1430 -1020 cal BC (HAR-460; 3020 ± 70 BP).

The orientation of house doorways

The orientation of prehistoric house doorways has been the focus of much attention in studies of prehistoric settlement (Brück 1996; Parker Pearson and Richards 1994b). For example, during the Middle Bronze Age the orientation of the doorways of round houses in southern Britain were predominantly orientated to the south-east (Bradley 2002, 76; Brück 1999b, 155). In contrast, in the same area roundhouse doorways during the Late Bronze Age and Early Iron Age were predominately orientated to the east (Oswald 1997). Why the dominant orientation of the round house should have changed from south-east to east during the Late Bronze Age / Early Iron Age is an intriguing question, given the similarities of these roundhouse architectural traditions in other aspects. Parker Pearson (1996b) has argued that the consistent eastern orientation of Late Bronze Age and Early Iron Age doorways represents a cosmological ordering of the world marking the rising and setting of the sun. At Leskernick on Bodmin Moor, it has been shown how the orientation of house doorways, rather than conforming to a single orientation, reference significant natural landmarks within the landscape (Bender *et.al* 1997).

On Scilly, entrance orientations were recorded using a sighting compass, and are expressed here as looking out through the entrance. The same chronological periods used in the analysis of house shape and size are adopted here to detect significant changes in orientation through time. The analysis of this data shows that no single orientation is prevalent and that whilst variations occur within and between periods no overriding trend occurs (Figs.6.10-6.13). The results of this analysis suggest that the entrance orientation of houses were not chronologically determined or organised by a single spatial code.

Whilst acknowledging the results of this analysis it is clear by looking at individual houses that changes in orientation did occur. The excavation of Nornour revealed that at two houses the original entrances were blocked and new ones opened (Butcher 1978). The process of blocking up old and establishing new entrances would have been a difficult undertaking that may have threatened the structural integrity of the house. The successful completion of this task demonstrates the skill of the builders and highlights the importance placed upon establishing new entrances. It is unclear when the changes in orientation occurred at Nornour, but based upon the known constructional sequence it would most likely have been around 1000 cal BC. In both instances, this process appears to have been associated with the reoccupation older houses and the construction of annexes. Changes in doorway orientation are not detected within other houses on Scilly but this may be because of the quality of older excavations. If it could be shown that similar changes did occur this might question the conclusions outlined above.

Although a comprehensive study of the view from house doorways was not carried out, from the limited data collected they do not appear to be orientated towards significant features of the island landscape (such as tors). The doorways of houses located in close proximity to the coastline do, however, have a tendency to be orientated away from the prevailing wind with entrances aligned along the contours of hill-slopes, an orientation that provides maximum protection from the wind whilst ensuring house interiors are not flooded by ground water running down hill-slopes.

6.4.4 Internal house features

The following analysis of the internal features of houses is limited to those sites where documented excavation has taken place. Internal features are identified from the settlement database in 22 (15%) instances and from this sample, four types were identified: hearths, partition walls, stone benches and paving. In order to analyse and cross-compare the internal arrangement of these features the internal space of an idealised round house has been divided into seventeen zones into which the positions of features have been plotted (Fig.6.14). This mapping of the spatial organisation of these features will form the basis of the following discussion.

Hearths

The hearth represents a focal point within prehistoric houses, around which people would have gathered to shelter from the elements, cook, consume food and tell stories. As such, the hearth is both a practical necessity and as a potent symbol of the life of the household. In the domestic context hearths played an important role in the daily life of the household; providing heat for warmth and cooking and as a principle source of light. Similarly, Richards (1990), tacking between historical practices in the 'Northern Isles of Scotland and Neolithic houses in Orkney, argues that the hearth was central to peoples lives, symbolising the unity and well being of the family. In order to explore these import aspects of hearths within prehistoric Scillonian houses let us look more closely at the types of heaths found on the islands and their placement within houses.

A total of 27 hearths are identified from the settlement database (24 associated with 18 houses, with the remaining 3 found in the open). The majority of hearths comprise shallow depressions within the rab emphasised by stone kerbs. In a few instances, hearths are better constructed and these can be classified as: horseshoe shaped hearths, box hearths and hearths constructed upon prepared clay platforms.

Types of hearth

Horseshoe shaped hearths comprise an open horseshoe arrangement of stones set around a stone-lined fire pit. They occur only in three instances within the database: two at Halangy Down and a further at Par Beach (Ashbee 1999; O'Neil 1949a). Similar hearths occur within prehistoric houses along the Western Atlantic seaboard of Britain were they are datable to the Iron Age (Parker Pearson 1999c). On Scilly, this type of hearth is late, dated at Halangy Down to the first century AD through their association with Romano-British pottery (Ashbee 1999). Whilst the dating for these hearths to the Romano-British period is likely, the lack of a detailed stratigraphic sequence from Halangy Down is cause for concern. Whilst the dating of the hearths remains unclear, it can be stated with confidence that their occurrence is late within the islands prehistory, being absent from settlements such as Little Bay and Nornour and only occurring within sites where occupation extends into the first century AD.

Box hearths comprise of four flat stone slabs, set upon their edges to form four sides of a stone box. Box hearths are dug into the subsoil with the base of the hearth formed by either the natural sub-soil or stone paving. Eleven box hearths are identified from the database, including three located outside of houses within settlement compounds. Box hearths occur within houses throughout the second and first millennium BC. Only two meaningful radiocarbon dates are available for these hearths, both taken from midden deposits overlying a hearth in house nine at Nornour. These samples produced dates of 1430-1020 cal BC (HAR- 460 3020 ± 70BP) and 1487-920 cal BC (HAR 457 2990 ± 100 BP).

Circular hearths are constructed upon prepared clay platforms surrounded by a kerb of stones (clay in this context being rab, which when subjected to heat sets to a hard baked clay-like material). These hearths occur throughout the second and first millennium BC, frequently along side box hearths. Circular hearths were periodically remade one on top of the other (Neal 1983). At Little Bay, a sequence of seven hearths was identified, the earliest of which producing a radiocarbon date of 2124-1525 cal BC (HAR-4324; 3490 ± 100 BP). This sequence is terminated by the highest surviving hearth (but not necessarily the last), which has produced a radiocarbon date of 1206-800 cal BC (HAR-1726; 2780 ± 80 BP). Similarly, at Perpitch, a sequence of two hearths occur overlying each other (O'Neil nd.g). The upper hearth was constructed from flat stones laid on top of the earlier, onto which a depth 7.5cm of clay was placed to create a level platform. Around this clay platform a low kerb of stones was defined the limits of the hearth. During the excavation of this hearth O'Neil noted that the prepared clay surface was decorated with impressed grooves that radiating from its centre to its circumference (O'Neil nd.g.).

The final form of hearth, because of poor preservation, can only be described as unclassified. The presence of these hearths is suggested by concentrations of charcoal and fire-cracked stones found within shallow scoops in the rab floors of houses.

The placement of hearths

If we look at the location of hearths within houses, we can see that hearths are found within the centres of houses (as within house A, Little Bay and House one at Nornour) and against walls (as within house 9 and site F on Par Beach). The location of hearths within houses cannot be linked to house chronology, occurring within houses ranging throughout both the second and first millennium BC.

The placement of hearths against the internal walls of houses is unusual and it is difficult to find parallels for this practice from elsewhere in prehistoric Britain. At first, this placement seems illogical, however, when we consider evidence for house construction - walls over 2m in height, – this location makes sense. From a practical perspective, placing a hearth against a wall creates an effective fireback, heating the stone structure of the house and creating a directional source of heat. At Nornour these hearths appear, most common within annexes (such as within Houses 2, 7 and 9 at Nornour) where they would have provided additional light to the interiors of the interlinked house.

Three hearths built against the face of a partition wall in house six at Nornour provide a notable exception to this practical logic (Fig.5.2). This wall blocks off a small section of the northern half of the house. Initially this wall was interpreted as a repair or buttress to the outer wall, but excavation demonstrated that the outer walls required no obvious repair or support (Butcher 1978, 43, fig.14). Furthermore, this wall was constructed with particular attention to detail with the inner face constructed of four large orthostats equidistantly spaced and with the hearths sited to correspond to this arrangement (Butcher 1978, 61, fig.23.no.6, Pl.IV). The placement of these hearths cannot be explained in purely practical terms and probably relates to rituals carried out within the house associated with the construction of the partition /cross wall. This wall with its three distinctive orthostats may represent a household shrine with the three orthostats representing the three enormous tors that dominate the summit of the island of Nornour (Fig.5.2). Whilst these hearths have no parallel elsewhere on the islands this may be due to exceptional preservation at Nornour and the quality of the sites excavation and publication.

Another important use of the hearth would have been for the cooking of food for the household. At House 1, 2 and 5 at Nornour, and within house B at Little Bay; box hearths occur adjacent to large circular hearths. The occurrence of both box and circular hearths within a single house may suggest that they had different functions within the household. At house one at Nornour a box hearth occurs adjacent to a large circular hearth. Butcher suggests that this box hearth may have been used as a tank in which water might have been boiled through the placement of heated stones (pot boilers); an interpretation support by finds of numerous small beach stones within the box hearth (Butcher 1978).

Further evidence for the use of hearths for cooking is suggested at house one, Nornour, by a series of small stake holes around the large circular hearth (Butcher 1978, 55, fig.20). These holes may have held stakes used for roasting meat and fish. Similarly, stone slabs found adjacent to hearths may have been used for baking whilst a kerbed circular hearth, within house two at Nornour, is attached to a small pit in the rab interpreted as a cooking pit (Dudley 1968,7).

Whilst cooking would have been the primary function of hearths, small numbers of them appear to have had specific uses. For example, within a house on Par Beach a large hearth was constructed opposite the houses entrance (Ashbee 1974, 168, fig.35). This hearth is set within an impressive fire setting comprised of two arcs of orthostats that open towards the houses entrance to the east. This fire setting shows signs of extreme heat and is arranged with the largest orthostat (measuring 1.5m in height) is located at the back of the hearth with others arranged to either side (O'Neil nd.g). Also associated with this hearth is a large stone, (2m in height and 0.75m wide) which would have originally stood upright in the north of the house. Other associated features include a triangular stone-lined pit located next to the hearth fed by a stone-lined drain (Ashbee 1974, 168, fig.35). This hearth takes up the majority of the interior of the house demonstrating that this house was not a dwelling. The size and form of this hearth might suggests a workshop or forge, yet excavation produced no evidence for metalworking. One possible interpretation is that this hearth was used for the production of marine oil through the rendering down of the internal organs of fish and blubber of sea mammals. This interpretation is given weight by Turk's observation that marine mammals, fish and birds rich in oil are particularly well represented in prehistoric bone assemblages (1971, 1978).

Partition walls

Internal walls occur in only eight instances within the database. They are found within houses dating to both the second and first millennium BC, occurring at house B at Little Bay, the first phase of house ten and the final phase of house one at Nornour (Butcher 1978; Neal 1983). At Nornour and Little Bay partition walls, each of which is terminated by an impressive orthostat, form small alcoves around the central hearth with access to each partition entered from the central area (Fig. 5.2, 6.9).

This zonation of house interiors generates the potential for the differential use of space between the central area, associated with the hearth, and an area between the partition and the outer walls, that may have been used for sleeping. Through the arrangement of partition walls distinctions may have been marked out between a public gathering area around the heath and more intimate and private spaces within the alcoves. This fragmentation of space would be further highlighted by the hearth, which would illuminate the central area whilst throwing the alcoves into shadow. Comparisons between the arrangements of radial walls on Scilly can be made with similar arrangements found within the Iron Age Wheel Houses on the Western Isles of Scotland. Here Parker Pearson interpreted them as symbolically representing in material form, the movements of the sun, moon and human lifecycle (Parker Pearson 1999c).

Benches

The concentric organisation of space created by partition walls is further emphasised at a small number of houses by the construction of stone benches placed around the central hearth. The best preserved of these benches occurs within house one at Nornour where a horseshoe-shaped bench was constructed of large slabs of granite (Fig. 6.9 and .6.15). This bench measures 8m in length and could have sat between 12-20 people. Similar, although more fragmentary benches also occur at Little Bay and Perpitch, St Martin's (Neal 1983, 51, fig.4; O'Neil nd.g).

Benches are orientated to face doorways and organise people in a horseshoe arrangement around the hearth. The formalised and spatially fixed seating of people around the hearth in this way may have fostered social unity or established social hierarchies and relationships, both within the household and between the household and outsiders. Using Humphrey's (1974, 26) analysis of the organization of space inside a Mongolian tent, as an analogy, formalised seating arrangements within the house might be arranged in terms of gender or seniority.

At Nornour and Perpitch, it is unclear when benches were constructed but it is assumed that they are the late within the constructional phases of the houses (latter half of the first millennium BC). However, this late dating is called into question by the occurrence of a stone bench at Little Bay associated with a sequence of six hearths. The bench partially overlays the lowest of these hearths which has produced a radiocarbon date of 1735-1132 (HAR-1715 3190 + 110BP), thus providing an *ate quem* date for its construction. The bench appears to have been arranged at a short distance from and encircling the subsequent sequence of 5 hearths. Between the third and fourth hearth a new floor of clay was laid throughout the hut sealing earlier hearths. This clay floor abuts the bench, but is not found beneath it, demonstrating that when this clay was laid the bench was already *in situ* (Neal 1983, 54). Above this clay a further two hearths were constructed the highest surviving (although not necessarily the last), produced a radiocarbon date of 1206-800 cal BC (HAR-1726 2780 ± 80 BP) providing a *post ante quem* date for the construction of this bench. It would seem from the dating of the hearth sequence in House B at Little Bay that the stone bench was constructed and in use during the latter half of the second millennium and continued in use into the first millennium BC.

Paving

The floors of houses on Scilly are uneven and tend to follow the natural slope of the hills on which they are constructed. This pattern of uneven and sloping houses floors is also found on the Cornish mainland within settlements such as Wicca Round, Sperris Croft and

Leskernick (Dudley 1941; Hamilton pers.com). The sloping of house floors is an intentional feature of houses on Scilly with no effort made to level them out. This aspect of houses creates an added dimension to interiors grading space between higher and lower levels.

The apparent unevenness of house floors may have been masked by the use of floor coverings such as furs, textiles, rush matting or bracken. In a small number of instances, it is possible to detect evidence for prepared floors made of clay, sand and stone paving. At Little Bay, Halangy Down and Nornour layers of clay are found that might have masked some of the roughness where natural rocks protrude through the rab floor. At Nornour, only scraps of clay occurred on house floors, but the middens around houses contained large quantities, perhaps removed from house interiors on abandonment. Within House B at Little Bay, a thick layer of clay occurred throughout the house interior whilst at Halangy Down sand provided a floor surface (Ashbee 1999; Neal 1983.).

Paving stones occur within houses although the ruinous nature of the houses and inadequate archaeological recording preclude us from knowing whether entire interiors or only specific zones were paved (as noted on some mainland sites [Butler 1997; Hamilton per.com; Mercer 1970]). In the few cases where reasonable preservation occurs (such as Nornour), paving appears restricted to specific areas such as doorways and passageways; this relationship between paving and house thresholds may relate to keeping house interiors clean as well as creating a conceptual distinction between an inside and an outside world.

In this section, we have explored the internal architecture of houses. The current database is limited to only a handful of sites but I would suggest that features such as internal partitions and paving are likely to be a general feature of Scillonian houses. Whilst no definitive statement can be made about the chronological relationship between internal features and house construction the data tentatively suggests that through time the internal spaces of houses became more spatially fragmented or at least their interpretation became fixed through architectural elaboration.

6.5 House abandonment and structured deposition

The significance of the structured deposition of artefacts within archaeological features (such as pits and the ditches of henges) has become an important research theme within the prehistory of Britain (Hill 1995; Needham and Spence 1996; Thomas 1991). Recent archaeological research on mainland Bronze Age settlements has identified that the structured deposition of objects played an important part in house abandonment (Brück 1996, 1999b). Research in Cornwall has shown that the abandonment of lowland Bronze Age settlements resulted in houses being intentional filled with soil and rubble and occasionally converted into burial cairns (Jones *et.al* 2002; Nowakowski 1991, 1999, 2001). At lowland sites such as Trethellan Farm (Nowakowski 1998), Penhale Moor (Nowakowski 2000), Trevisker (ApSimon and Greenfield 1972) Callestick (Jones 2002) and Gwithian (Burgess 2001; Megaw 1976; Thomas 1958) excavation produced large quantities of artefacts associated with abandonment. In contrast, the excavation of upland Bronze Age settlements in Cornwall such as, Leskernick (Bender *et.al* 1997), Stannon Down (Mercer 1970), Trewey Foage (Dudley 1941) Sperris Croft and Wicca Round (Dudley 1957) have produced only a small number of artefacts. Whilst both upland and lowland sites were cleared of artefacts on abandonment, houses in the uplands, in contrast to their low-lying neighbours, were never back filled with occupational debris on abandonment.

In this section, we will consider for the first time evidence for house abandonment and structured deposition on Scilly. Analysis here will be limited to settlements were documented excavation has taken place.

6.5.1 The identification of house abandonment on Scilly

As previously shown, prehistoric settlement on Scilly comprise of sequences of houses that were constructed, occupied and abandoned before being replaced by new houses; a process most clearly demonstrated by the constructional sequence at Nornour (see Chapter 5). At Nornour abandonment resulted in house interiors being filled with deposits of soil, rubble, midden and artefacts. For example, House 1 at Nornour on abandonment buried beneath two metres of deposits. Dudley (1967) argued that this infilling might have resulted from a landslide that engulfed the house after its abandonment. This interpretation is unlikely, as a landslide of this velocity would need an upslope topographical source and would have caused damage to the exterior walls and internal features of the house; all of which remain intact (Fig.6.17). The filling of this house, with soil and rubble, was therefore an intentional cultural act associated with its abandonment.

At other Scillonian sites a similar scenario occurs, where houses buried beneath deposits on abandonment. The bulk of this redeposited material is comprised of soil and rubble but confirmation of the use of midden material is demonstrated through the inclusion of large quantities of marine shells (most notable limpets), animal bones and broken artefacts (Fig.6.16). The likely source of these deposits is from the middens that grew up around houses in the course of their lives, such as those from English Island Carn (O'Neil nd.d), Halangy Down (Ashbee 1999), Halangy Porth (Hencken 1932, Ratcliffe and Stralker 1996), Little Bay (Neal 1983), May's Hill (O'Neal nd.d), Nornour, (Butcher 1978; Dudley 1967) Porth Cressa (Ottery pers.com; Ratcliffe and Stralker 1996) and Porth Killier (Ratcliffe and Stralker 1996).

The deposition of this material within the interior of houses on abandonment may have marked the death of a house and its householders. During the life of a house objects and substances were brought into the house (or household) where they were transformed into food, artefacts etc. The waste material from these transformations was deposited outside of houses within middens. On abandonment, refuse, produced during the life of a house, was redeposited within the houses' interior reversing the process of consumption that characterised its lifecycle. The ambiguous nature of this material may have acted as a powerful medium for symbolising states of transition, such as from life to death, with its burial beneath refuse suggesting that it was transformed from the realm of the living to the realm of the dead.

6.5.2 The process of house abandonment

We have established that the abandonment of houses on Scilly resulted in them being filled with deposits and that these deposits were most likely derived from refuse produced by the house during its life. Let us now focus upon the artefacts that found within these abandonment deposits. We will begin by looking at the eastern settlement of Nornour, as the stratigraphic and constructional sequence of this settlement is better understood than elsewhere on the islands. Patterns of deposition identified at this settlement will inform other sites where only limited archaeological intervention has taken place. The structural and chronological sequence for the eastern settlement of Nornour was established by Butcher (1978, 33) and is summarised in Chapter 5. From each house within this settlement sequence, three phases of artefact deposition are identified:

- *Construction*: Artefacts deposited during the construction of a house, such as those located within the fillings of walls.
- *Occupation*: Artefacts located on or in association with house floors.
- *Abandonment*: Artefacts associated with the abandonment of houses, such as those located within infilling and levelling layers

Within this part of the settlement, 3802 artefacts were recovered from house interiors (Butcher 1978, 67-96). When these are tabulated in relation to context and phase, it is shown that the vast majority derive from abandonment (Fig 6.17). Artefacts are distributed sporadically throughout these abandonment deposits and show little evidence of spatial organisation. They include quern stones, rubbing stones, flints and over 3000 sherds of pottery (from a range of vessel types and styles). Although artefacts from abandonment deposits are diverse, when taken as a whole they form chronologically coherent assemblages (as demonstrated in Chapter 5).

In contrast to abandonment, few artefacts were recovered from the constructional and occupational phases of houses at Nornour (Fig.6.17). Artefacts recovered from constructional phases were placed within the soil and rubble cores of house walls. The occurrence of potsherds within prehistoric house walls has been observed elsewhere in the south-west, such as: Trethellan Farm (Nowakowski 1991), Stannon Down (Mercer 1970), Leskernick (Hamilton pers.com) and Shaugh Moor (Wainwright *et al* 1979, 1980). At

Nornour, artefacts may have been incorporated within house walls accidentally, within soil and rubble collected from the surrounding settlement complex. Alternatively, the inclusion of artefacts within house walls may have been intentional with the physical remains of past households used to create the fabric of a new house. Through the inclusion of older artefacts within new houses, a chain of continuity was forged between past and present islanders.

Similarly, only a small percentage of artefacts were recovered from occupational phases at Nornour. This paucity of finds might suggest that houses were cleared of artefacts, or house floors dug out and removed, during the process of abandonment The relatively high number of artefacts found in the occupational phase of house five appears to run contrary to this interpretation. Whilst this layer may represent a phase of occupation, Butcher suggests the possibility of a different scenario. She notes that this deposit sits in contrast to the underlying ram and that its stratigraphic relationship to later deposits is poorly defined (1978, 49). It is possible therefore, that what we interpreted here, as an occupational layer, may be a further abandonment deposit.

Butcher also noted that, "there appeared to be no difference between the deposits on the floor and the general filling of building five, as if it had been kept clean until a late stage and then filled in with rubbish and debris" (Butcher 1978, 63). If Butcher is correct, we can imagine that on abandonment house floors (including occupational deposits) were removed and then redeposited with other abandonment material. This interpretation would explain the sharp definition in the stratigraphy between the rab and the redeposited infill.

A similar scenario is observed at Porth Cressa where the floor of a house, exposed within a cliff-section, appears to have been removed on abandonment. Evidence for the removal of this houses floor is suggested in the stratigraphy where a sharp contrast can be seen between the natural rab and its infilling of soil and midden (Ratcliffe and Stralker 1996, 75, fig. 41). Ratcliffe notes that the rab that formed the floor of this house dipped down 0.12m from the base of the walls on either side of the house and that this 'scooped out' effect may have resulted from the deliberate scraping clean of the house floor (Ratcliffe and Stralker 1996, 74).

6.5.3 Artefacts from abandonment deposits

What is clear from this analysis is that only low concentrations of artefacts can be associated with the occupational phases of houses and that the process of abandonment generated a dramatic increase in artefact deposition. The artefacts that comprise these deposits include: pottery, flint and stone artefacts (Fig.6.18). It should be noted that the degree and quality of excavations from which this data has been collected is extremely variable - from a number of sherds collected from rabbit scrapes in a prehistoric house (Ratcliffe and Sharpe 1991) to the total area excavation of a settlement (Butcher 1978).

Pottery

Large quantities of pottery come from the abandonment phases of houses (Butcher 1978; Neal 1983; O'Neil nd.g, nd.f). The majority of this pottery is small and heavily abraded and has been moved around in the soil for some time before its redeposition. In other instances, complete vessels and sherds of a substantial sized occur. The large size and freshness of the potsherds from abandonment layers at West Porth, Samson suggests they were dumped inside the house once it had become abandoned rather than as debris trampled into the floor whilst in use (Ratcliffe and Stralker 1996). Similarly, sherds recovered from Tregear's Porth are large with fresh fractures. These findings might suggest that as part of the closing down and abandonment of houses, pots were intentionally broken and incorporated within abandonment deposits.

Flint

The composition of flint tools from the abandonment deposits of settlements demonstrate a narrow repertoire of flint tools dominated, by scrapers, borers and burins (Butcher 1978). The presence of borers in some numbers is a distinctively Scillonian feature not found on mainland sites (Quinell 1978). The predominance of scrapers and borers might relate to a continued emphasis upon animal skins rather than cloth where as the burins may have been used for the working of bone and antler materials that may have been especially significant in light of the lack of sources of wood on the isles and the scarcity of metalwork. The lack of long bladed tools and arrowheads from settlements might suggest that the assemblages of flint tools incorporated into the abandonment layers of houses are reflective of the activities carried out within the house rather than those carried out within other island locales.

Stone artefacts

A number of larger granite artefacts found within settlements, include querns and granite basins. A considerable amount of effort and time must have gone into the production of these artefacts, made thought the laborious pecking and grinding of granite boulders (Fig.6.18). Quern stones represent the everyday activities carried out within the interior of houses such as the grinding of grain, and as such, represent the life of the household. These querns were broken before their incorporation within abandonment deposits (Fig.6.18, no.H). As these quern stones are made from substantial blocks of granite (making them extremely difficult to break) it is likely that they were broken intentionally at the end of their lives. The smashing and deposition of these artefacts upon the death of the house may therefore mark the end of the household and its transformation into another realm. Granite basins could have been used as mortars for the grinding of grain or for the pulverising of fish, sea mammals and sea birds (in particular their livers) to extract highly nutritious oils (Fig.6.18, nos. F and G). The inclusion of these obviously useful artefacts within abandonment deposits suggests that they were intimately associated with particular households and required to be buried within houses on abandonment

Further stone objects found within house abandonment deposits include holed granite boulders, deliberately selected from Scillonian beaches for their flattened circular shape, through which holes have been drilled. These boulders range from 0.1m to 0.6m in diameter, with the majority being between 0.15m and 0.3m in diameter (Fig.7.18, nos. A, B, C and E). Through analogy, with historical collections of fishing equipment from south-west Britain and Ireland, these artefacts can be interpreted as net or line sinkers (Morton Nance 1963, 185, plate 6, fig. 5, plate 7, fig.24, fig. 27). These stones would have been used to weight down fishing nets, lines and traps. The larger of these stones would have been to heavy to use upon nets and lines, requiring heaving, but might have been used on nets set on frames within the intertidal zone or as boat anchors (Salisbury 87, fig.11.16).

Similarly, stones with deep grooves around their centres are found amongst the abandonment phases of prehistoric houses (Fig.6.18, no.C). These stones are interpreted in the archaeological literature of Scilly as hammer stones (Clough ad Cummins 1988; Dudley 1967). However, comparison of these stones with historical collections of fishing equipment suggest that these stones were also fishing weights, with the grooves around their circumferences being used to secure a line (Arlott 1972; Morton Nance 1963, 185, plate 6, fig. 5, plate 7, fig.24, fig. 27). At Pendrathen, Gray identified nine of these weights in a prehistoric house. The uniform placement of these weights at Pendrathen suggest they may have been attached to a fishing net that has subsequently disintegrated (Gray 1972, 26-27, fig.8). If Gray is correct in his interpretation we might imagine that the holed and grooved sinkers found within other prehistoric houses on Scilly may also have been attached to nets and lines and that these were also deposited within the abandonment phases of houses.

Historically fishing nets on Scilly have been prized possessions owned by particular island families or more frequently the possessions of individual islands. Gill tells us that during the 19th century, the island of St Mary's owner three fishing nets named, Habnab, Friendship and Industry (Gill 1975, 107-108). The efficient use of fishing nets, either from the shore or from boats, could not be carried out by a single person but would require the participation and cooperation of groups of islanders. A great deal of effort would be invested in the manufacture and repair of nets and we can assume that these were highly treasured possessions. Fishing nets provide sustenance for the island community but their making, repair and use requires social cooperation, as such, nets metaphorically bonded together island communities. The inclusion of nets, complete with their sinkers, within the abandonment phases of houses might suggest that the death of an island household resulted in the breaking down of previous social bonds, requiring social networks to be renegotiated. Perhaps part of this renegotiation was the construction of new fishing nets to reunite the island community.

6.5.4 Structured deposition within archaeological features

Past excavations on Scilly have not recognised the possibility of structured deposition within houses and therefore the data on which we can draw in considering the deposition of artefacts within archaeological features is limited. Only in a small number of instances can evidence for structured deposition be identified, but the recognition of this phenomenon alerts us to the possibility that this practice may have been a more widespread than currently assumed.

For example, postholes located below House 10 at Nornour were backfilled with earth containing potsherds and a copper-alloy awl (Butcher 1978, 35, 37). Similarly, early features such as stone lined pits at Little Bay and Perpitch were filled with earth containing potsherds (Neal 1983, 52; O'Neil nd.g). The composition of these abandonment deposits is similar to those found within houses and might suggests that a similar process of closure was extended to such features. As in each of these instances, the abandonment of a feature resulted in the construction of an overlying house; we might suggest that these depositional episodes represent foundation deposits for the reoccupation of a site.

Other examples of structured deposition include the way in which two hearths within house one at Nornour were treated during abandonment. The first hearth was a stone box hearth into which an Iron Age bowl was placed upright in one of its corners (Dudley 1967, 5, fig. 7). Once placed within this context the hearth was filled with layers of soil, midden and ash.

The second hearth was circular and located in the centre of House 1 (Fig.6.9 and 6.15). During the house's occupation, this hearth comprised of a semi-circular clay platform around which beach boulders were placed (Butcher 1978, 55, fig.20). On abandonment, this simple hearth was modified; its sides built up with beach stones and wads of clay to a height of 0.26m and into this, six miniature pots were placed (Fig.6.19). These pots have no parallel, either within the archipelago or upon the mainland; they are made from gabbroic clay and appear to represent miniature copies of Middle Bronze Age Trevisker vessels (Parker Pearson 1990, 1995). The entire hearth was then filled with layers of soil and limpet shells. This raised structure resembles a house in miniature, and like a house, on abandonment, was filled with deposits of soil, midden and artefacts.

Whilst the houses were occupied, these hearths would have been the focal points of households providing heat for cooking, warmth and the principle source of light. The fire that burnt within these hearths would represent both metaphorically and practically the life energy of the household and upon the death of a house this life energy would have been extinguished. At Nornour, the process of closing down and extinguishing hearths was carried out through specific depositional acts that may have included the importation of artefacts for this purpose. The process of closing down hearths at Nornour closely matches that observed within houses, but current data does not allow us to explore whether the treatment of hearths at Nornour was specific to this site or also carried out within houses elsewhere within the archipelago.

In this section I have argued that the death of a house required certain depositional acts to be carried out, whereby houses were buried at the end of their lives. Artefacts associated with the occupation of houses were clearing away upon their death and redeposited within substantial abandonment deposits, which perhaps evoked metaphorical connections with the burial of the dead. Presented here is the first attempt to explore structured deposition within Scillonian houses. As stated at the beginning of this section the data upon which this interpretation is based is limited, relating primarily to the excavation of Nornour. In order to pursue this line of inquiry, further excavation needs to be carried out with the recognition of structured deposition as a key research question.

6.6 A final note

The settlement database for Scilly demonstrates the importance of specific island locales. These locales were primarily located along the inner coastline of the archipelago and used continually throughout prehistory. The association between settlement and the ancient coastline suggests the importance of the sea and seafaring to prehistoric island communities, and in particular, to the practical and symbolic significance placed upon landing places and entry point into the archipelago. Whilst the importance of the sea is emphasised in the location of prehistoric settlement, the presence of field boundaries and artefacts associated with the processing of crops, suggests that agriculture played an equally important role in the lives of islanders. I have argued that the house was the centre of life for prehistoric Scillonians and that the lifecycle of the house and its householders was intimately linked. Finally, I have argued that on the death of a house (and hence its householders) complex depositional acts were required that resulted in the burial of houses beneath abandonment deposits. Through the deposition of artefacts within abandonment deposits, relating to agricultural and fishing activities (e.g.fishing nets, sinkers and querns), the process of house abandonment referenced the daily activities of the living household.

In chapter seven I will turn attention to the numerous burial and ceremonial monuments found upon the islands and their relationship to the island landscape.

7. PREHISTORIC MONUMENTS AND THE ISLAND LANDSCAPE

The past decade has seen increasing interest in the study of the landscape setting of prehistoric monuments (Bender 1993; Cummings and Whittle 2003; Tilley 1994). Earlier research focussed upon the Neolithic but recent work has considered the later periods of British prehistory (Hamilton and Manley 2001). Of particular relevance to our consideration of Scilly are phenomenological based approaches that seek to demonstrate the role of monuments in creating and manipulating our sensual experience of landscape. Prehistoric landscape studies in south-west Britain have been at the forefront of this research where they have focussed particularly upon the relationship between monuments and natural features of the landscape, such as granite tors (Bender *et al* 1997; Bradley 1998a; Tilley 1996b; Tilley and Bennett 2001).

This chapter will consider the landscape context of Scillonian burial and ceremonial monuments. My data was collected primarily through fieldwork carried out on both land and sea (where an ocean kayak was used to navigate the archipelago). I shall start by outlining this database for the islands in order to reconsider monument classification and use. I will then consider the distribution, setting, materiality and orientation of Scillonian monuments. Analysis will consider the significance of the spatial settings of these monuments and how these settings might have structured and manipulated the experience of the ancient island landscape. Finally, I will explore the relationship between monuments and the natural world and in particular, the incorporation of natural earth-fast grounders within entrance graves and cairns.

7.1 The prehistoric monuments

Traditionally, distinctions are made between burial monuments (where the perceived function was for the internment of human remains) and ceremonial monuments (where the monument is not associated with burial, but is thought to be ritual or non-domestic). In practice these distinctions breakdown since burial monuments frequently contain no evidence of burial, whilst many ceremonial monuments do. In order to provide a systematic overview of the range of monuments found on Scilly, this section will initially maintain this traditional division; this distinction will then be broken down in subsequent sections through analysis of the spatial and social relationship between monuments and the island landscape.

The Isles of Scilly have a range of burial monuments spanning over three millennia of prehistory. They comprise: entrance graves, cairns, flat-cists and Porth Cressa cists. As discussed in Chapter 5, the majority of these monuments are characterised by inadequately recorded excavations and poor chronological resolution. In the case of the entrance graves, these problems stem from one of their defining characteristics, accessibility. Little analysis and interpretation has been carried out on these monuments these monuments (especially in relation to their dating), as a lengthy period of access would have permitted the disturbance, destruction or removal of datable deposits. In the case of cairns and flat cists, the lack of excavation limits our chronological understanding. In contrast, the chronology of Porth Cressa cists is better understood, as well-documented excavations exist that have provided independent dating (including radiocarbon dates and chronologically distinctive artefacts). The archaeological literature of Scilly records two types of ceremonial monument: standing stones and a stone row.

7.1.1 The Scillonian entrance grave

Scillonian entrance graves are small chambered cairns, comprising of a roughly circular mound of stone and earth, revetted by a kerb and containing a chamber (Fig.7.1). The size of these monuments varies considerably from 5.2m to 22.7m in diameter (Fig.7.2). Typological distinctions exist between entrance graves and cairns by the presence of an open chamber, and therefore the ability to re-enter and reuse the monument after its construction. The Scillonian database records 83 entrance graves in contrast to nine on the Cornish mainland (Barnatt 1982; Ratcliffe 1989). Of the eighty-three Scillonian entrance graves, nine are only alleged and have been excluded from further analysis. Of the remaining, three have been destroyed, although these sites are included within this discussion, as accurate accounts of them exist. Appendix E contains a comprehensive list of Scillonian entrance graves.

The architecture of the entrance grave

Entrance grave chambers are constructed of a mixture of orthostatic and coursed walling, held in place by 'trig' stones along their bases. Surmounting these walls, large capstones are placed across the chamber and levelled into place with smaller stones to form a roof. Where chambers are intact, we can detect a common pattern of construction. The terminal ends of chamber walls comprise large orthostats arranged around a large single back stone, whilst walls nearer entrances are constructed of coursed walling. This pattern of construction suggests a distinction between the deep space of the chamber and the shallower space of the entrance. This definition of space is most clear at Normandy Down, Innisidgen and Porth Hellick Down but also occurs on sites elsewhere within the archipelago.

Evidence from four monuments suggests that some chamber walls were plastered with clay. Evidence for the use of plaster has been recorded at Buzza Hill, Innisidgen Carn, Knackyboy Cairn and Lower Innisidgen (Ashbee 1974; Borlase 1773, 1756; Hencken 1932, 1933; O'Neil 1952). The orange plaster used within chambers derives from clayey deposits found within the rab (which sets hard when exposed). The recognition of plastered walls radically changes how we perceive these monuments and suggests the possibility that chambers may have been decorated with paintings or engravings.

The shape of chambers is remarkably consistent, being widest at their centres and narrowing towards their entrances and terminals. This shape has led Ashbee (1982a) and Thomas (1985, 142-144, fig.60) to compare them to the shape of boats. Ashbee relates their shape to Irish curragh pens, which are long, low; open-ended megalithic structures constructed around beached boats in exposed gale swept localities (Piggott 1954b: 24, fig 5, Pl II). Ashbee agues that in view of the antiquity of skin boats the use of pens of this nature may equally have held wide currency in prehistory. He argues that the chambers of entrance graves might symbolically represent pens that would once have been present along the Scillonian coastline.

In reassessing the shape of surviving chamber plans I agree with Ashbee and Thomas that they resemble the plan-shape of boats; perhaps wooden framed and hide covered craft with blunt transomed sterns (Fig.7.3). The boat shaped chambers of entrance graves reflects both the symbolic potential and practical reality of sea-craft for prehistoric islanders. The boat would have allowed the first ancestors to travel to the archipelago and would have played a major role in day-to-day sustenance of islanders. The boat would have provided a powerful cosmological symbol for a seafaring people. The symbolism of the boat may have been associated with the mythical discovery and settlement of the islands from the mainland or some other distant land over the horizon. This symbolism is particularly appropriate for a burial monument, as boats transports the living between realms – from shore to the open sea - whilst the boat-shaped chambers might represent vessels for ancestral journeys between the realm of the dead and the realm of the living. Through adoption of boat shaped chambers entrance graves act as solid metaphors that draw together both land and sea, and living and dead.

The shape of chambers causes a restriction to their entrances that requires people to crawl on hands and knees to gain entry. This restriction placed constraints upon entry and movement, controlling and ordering the conditions under which internal spaces were experienced and encountered. Apart from the physical restraints placed upon the body, chambers constrain and control light. Although the presence of lightness and darkness within the chambers is primarily the result of chamber orientation, chamber shape also plays a role. Light and darkness appear to define spatial areas or zones within the chambers, marking distinctions between front and back, right and left. A front/back distinction is created primarily through distance whilst a left/right distinction is produced through the shape of chambers, primarily through the narrowing of entrances, which has the effect of illuminating the centre of the chamber whilst casting its sides into shadow.

The mounds of stone and rubble that comprise entrance graves do not appear to have any discernable structure, although as only a small number of recorded excavations exist this observation may be misleading. Kerbstones may comprise of orthostats or stones laid as coursed walling. Due to the uneven preservation of kerbs around these monuments, it is difficult to assess whether their arrangements form any spatial patterning. Only at a small number of monuments, such as the Great Tomb on Porth Hellick Down and Innisidgen Carn, is the preservation of kerbstones sufficient to record their size and shape and relate this data to their placement around the monument. In both instances, it would appear that the largest kerbstones occur at the four cardinal orientations of the monuments (either side of the entrance, to the rear of the monument and at 90° to the orientation of the monuments chamber). However, preservation of these monuments is partially as result of their reconstruction (by the Ministry of Works) and it cannot confidently be determined how much of the present structure of these sites is the result of this modern reconstruction.

Burial and deposition within entrance graves

As demonstrated in Chapter 5, entrance graves date essentially to the Late Neolithic/Early Bronze Age but were reused well into the second millennium BC. Throughout this period the use and significance of these monuments appears to have changed, most notably in the form of burial practice carried out within their chambers; from communal inhumation to communal cremation and finally to the placement of single cremations as satellite burials.

The earliest burials within entrance graves were inhumations. At Obadiah's Barrow, disarticulated human remains were found below the stone paving that formed the floor of the later chamber (Hencken 1933, 22, fig.9a). These human remains were unaccompanied by artefacts but were found within a deposit of dark soil that stood in marked contrast to the underlying rab. The chamber of this monument was reused; first, a paved floor was laid over earlier internments and upon this paving, cremations within urns were placed. Similarities can be drawn between the reuse of Obadiah's Barrow and those of Knackyboy Cairn, St Martin's and North Hill, Samson (Hencken 1933, 22; O'Neil 1952). In both instances, the excavation of chambers revealed deposits of dark soil (containing small abraded pieces of pottery) below stone paving, but in contrast to Obadiah's Barrow, no evidence for inhumation burials was found in either chamber. The absence of human remains at these sites may be due to poor preservation (due to the acid soils), inadequate and limited excavation and disturbance due to later reuse of their chambers.

Later burials placed within the chambers of entrance graves were usually within urns and occasionally accompanied by grave goods such as beads, bone artefacts, metalwork and selected pebbles and stones (Fig.7.4). Chambers appear to have received a series of burials throughout their use although in the majority of cases it is not possible to reconstruct a sequence of deposition. It is also unclear why some entrance graves such as Knackyboy Cairn or Obadiah's Barrow, should contain large quantities of burials whilst others contain only a few or none at all. Whilst this discrepancy may be partly due to the small number of monuments excavated, this alone cannot explain this phenomena and it is likely that social factors played a significant role. Some chambers may have acted as charnel-houses for human remains brought from several other monuments, perhaps as markers of new allegiances between families and groups or at particular times that demanded a concentration of the dead.

The absence of evidence for burial from many Scillonian entrance graves questions our interpretation of them as burial monuments. Whilst containment of the dead was certainly one function of these monuments, the most common contents of these monuments are deposits of dark greasy soil. Ashbee (1982a) and Thomas (1985) describes these deposits as containing such things as soil, small sherds of pottery, charcoal, ash (not associated with cremations) and pebbles, and has interpreted them as representing the deliberate deposition of occupation debris. Some of this material such as non local-stones, like pumice found at Porth Hellick (Hencken 1932), can reasonably be interpreted as 'grave goods' whilst others, such as top soil and ash, are not so easily be explained within this term of reference. The consistent deposition of this material within the chambers of entrance graves suggests that such deposits were intentional and significant.

In stressing similarities between the deposits found within entrance graves and those from settlement we break down the distinction between a ritual and everyday world of domesticity. Moore (1996: 102), has shown how different substances may be discarded, deposited or set aside in different ways depending upon how they are perceived, and that depositional practices are guided by the way in which items and substances are classified.

Moore shows how different substances, such as ash, often accompany burials because of their metaphorical associations with transformation and change. It was shown in chapter 6 that rubbish (soil, rubble, midden and broken artefacts) was used within Scillonian settlements to mark the abandonment (or death) of individual houses could a similar process be in operation within these burial monuments?

Elements of artefact deposition, identified within settlements, also occur within entrance graves. One example is the incorporation of a broken quern stone rider within the paving of an entrance grave on North Hill, Samson. The reuse of this artefact suggests its transferral from one realm to another from the world of the living and the household to a world of the ancestors. Whilst similarities between abandonment deposits from settlement and those found within entrance graves occur, important differences exist. One notable difference between these deposits is the absence of marine shells and animal bones from the chambers of entrance graves. One exception here is the jawbone of a pig found within the chamber of an entrance grave at Halangy Porth (Gray 1972), however, it is likely that this bone is a late intrusion (it was located during the clearing out of vegetation and rubble from the monuments chamber and cannot be related stratigraphically to any definable context).

An alternative interpretation of these deposits is that they comprise the scraped up remains of funeral pyres. Whilst funerary pyres would have existed on the islands, evidence for their identification is sketchy (Ashbee 1974, 116-117; Cornish 1874). Environmental data from the islands suggests that a sustainable source of trees, needed to fuel the number of cremations present on the islands, is unlikely to have been available. In the absence of such a resource, furze (gorse) and dried seaweed, perhaps supplemented with marine oil, would have provided an alternative fuel. The heat produced by such readily available fuels would produce an intense heat easily capable of rendering down human remains. Once the visible remains of cremations, such as human bone, were collected from the pyre and deposited within urns, the remaining material might comprise of a dark oily deposit of ash and soil. The description of the contents of entrance graves as 'dark and greasy' or as 'strong unctuous earth that smelt cadaverous' Borlase (1754, 54) might fit well with this interpretation. The redeposition of such substances may have been socially required and seen as polluting, the subject of taboos (Douglas 1984), therefore the containing of these within the entrance graves may have been seen as a way of controlling and pacifying these potentially dangerous substances.

Entrance graves were used and reused over considerable periods of prehistory. Throughout this period their use and significance changed, most notably in the form of burial practice carried out within their chambers. Similarly, deposition within the chambers was not consistent, in that some entrance graves contain very little whilst others numerous internments. These findings suggest that whilst entrance graves were primarily they would burial monuments they would never have had any single meaning; but acted as resources of knowledge about the island and its islanders.

7.1.2 Cairns

The Scillonian database base records a total of 384 cairns, the majority of which occur within cairnfields. Through comparison with similar cairnfields identified on the mainland those on Scilly should date to the first half of the second millennium BC; a period associated with the widespread adoption of: individual burial, the construction of more substantial houses and the use of more intensive farming regimes (Barber 1997; Johnston 2000). Cairnfields on Scilly comprise of a variety of different types of cairns that employ similar structural principles in their construction. However, due to the lack of excavation within cairnfields we do not know how this variation relates to the use of these monuments. Most cairns are relatively small with visible diameters falling between 4 and 7 m and seldom rising over half a metre in height. In a small number of instances, larger cairns occur with dimensions of up to 22 metres in diameter and 2.2 metres in height. Cairns vary in form, the most basic comprising of small piles of loose boulders, whilst kerbs of orthostats surround others. Questions remain as to how many cairns contain burial chambers, but on the basis of excavated examples it would appear that a proportion should contain, at best sunken stone-lined cists and at worst shallow burial pits. The identification of cists below cairns is based upon survey and archival field reports. In a few instances, such as upon North Hill Samson and Hillbenigates (St Martin's), cists beneath cairns have been demonstrated through excavation (O'Neil nd.e; Smith 1863), whilst in other instances, the presence of a cist is suggested by depressions within the fabric of the cairn, resulting from antiquarian robbing.

Cists take the form of stone boxes formed by four granite slabs set at right angles to one another and sealed by a single capstone (Fig. 7.5). A cist on North Hill, Samson has used mortise joints to link together its chamber walls and has used clay to bedded down its capstone (Smith 1863, Piggott 1941 Ashbee 1974). Of the 384 cairns recorded on Scilly, nineteen have been shown to contain cists and a further six have internal structures that suggest ruined chambers. A full list of Scillonian cairns is provided in Appendix F.

As well as found beneath cairns, stone cists occur without covering cairns (Fig 7.6). Ten of these flat cists are recognised on Scilly. The classification of flat cists as a separate burial tradition to cairns should be treated with caution as in a number of instances archival reports suggest small cairns may once have covered cists (Ashbee 1952-53, 30; O'Neil nd.a). Cairns may have been removed from flat cist through field clearance, before the discovery of their underlying chambers. For example, at Town Lane, Gibson recorded a cist within the surface of one of the main roads of St Mary's (a context that would almost certainly have destroyed evidence of a covering cairn), whilst a small cluster of four flat cists on Telegraph Hill, are upon ground that has been parcelled into fields and intensively farmed since medieval times (Crawford 1928, 120, plate III; Thomas 1985, 129). Whilst there is evidence for a small number of flat cists on the islands, their similarity with cists found beneath cairns suggests that both be considered as variations of a single grave tradition. Appendix G contains further details of Scillonian flat cists.

In contrast to the multiple burials found within Scillonian entrance graves, single burial appears to have been the norm within cists (both flat and beneath cairns). Evidence from three of the seven excavated cairns suggests cremation as the burial practise, but the small size of this sample suggests caution. Artefacts, such as a pottery, occasionally accompany burials beneath cairns. In other instance metalwork occurs, such as a pair of Early Bronze Age armlets from Peninnis Head and a bronze knife from Carron Rocks (Fig.7.7). It is disappointing that so little research and excavation has been carried out on the most commonly occurring prehistoric monument on the islands.

7.1.3 Porth Cressa cists

Porth Cressa cists comprise of oval and sub rectangular burial chambers constructed within pits in the subsoil. The walls of these cists comprise a combination of orthostats and coursed walling that are sealed by capstones set at right angles to the longitudinal axis of the cist (Fig.7.8). The Scillonian database records 33 Porth Cressa cists. Four previously undocumented cists are included in this study these include:

- Two discovered during building work at Lunnon Farm (St Mary's) during 2001 (Johns pers.com)
- A cist from Par Beach, St Martin's, rediscovered from my archival research within the NMR
- A cist recorded in a cliff-section on the east side of Porth Cressa Bay, during my fieldwork on Scilly in 2000 (Fig.7.9).

Whilst the dimensions of these cists are fairy consistent (averaging 1.25m in length by 0.75m in diameter), the discovery of an exceptionally long cist at Par Beach suggests that variation exists (Fig.7.10).

Whilst these monuments appear individually, they usually occur in pairs or within small cemeteries. When single cists occur they probably represent the exposed below ground remains of larger groups. Geophysical survey at recently exposed examples at Lunnon and Hillside Farm have been shown to comprise of more than one cist, although the precise size of these cemeteries remains to be demonstrated (Johns pers com). It is rarely possible to examine Porth Cressa cists in the course of fieldwork as the majority have been either destroyed by development and erosion or shrouded by sand. However, in contrast to other monuments, a large percentage of these cists have been excavated and published (Ashbee 1954, 1979, 1999; Dudley 1961-1962; Tebutt 1934).

Traditionally Porth Cressa cists date to the Romano British period through bronze brooches recovered from Parson's Field (Ashbee 1954). This dating has recently been questioned by finds of Late Iron Age metalwork within a cist at Hillside Farm. Confirmation of this Late Iron Age date is provided by two radiocarbon dates (taken from human bone) that have produced a weighted mean age of 200 – 45 cal BC (OxA 12095 and OxA 10255; 2098 ± 21

BP). Porth Cressa cists should be considered as Late Iron Age burial monuments that continued in use into the first and second centuries AD.

A feature of Porth Cressa cists is their use of granitic clay to seal up gaps within their chamber walls and bed-down capstones. The sealing of cists in this way may explain the good survival of human bones and metal artefacts from their chambers, which under normal circumstances would not have survived in the acidic soils of the islands. Where preservation of human remains occurs, the burial rite is crouched inhumation.

Burials are frequently accompanied by grave goods usually comprising of brooches, pottery and non-local stones (Fig.7.11). At Hillside Farm, an exceptionally rich burial contained amongst other items: a sword, shield and mirror (Fig. 5.23). Brooches found within cists may have attached clothing or death shroud to the deceased. At Hillside Farm, initial analysis of environmental samples taken from the cist, suggest complex funerary rites that include the dead placed upon an animal skin and wreaths placed within the grave (Johns pers.com.). Similarly, at a site on the Old Man of Tean, Tebutt suggests that wickerwork or reed matting was used to line the inside of a cist (Tebutt 1934). Whilst these examples give us a glimpse at the possible complexity of Late Iron Age burial practices on Scilly these the nature of these rites require further analysis and publication.

7.1.4 Standing stones

The Scillonian database identifies nine standing stones, five of which are upstanding (Fig.7.12). Details of these monuments can be found in Appendix H. A standing stone on Cruther's Hill, recorded as upstanding by Borlase (1756), was relocated during my fieldwork lying fallen amongst gorse on the eastern slope of Cruther's Hill [SV 9296 1518]. On Mount Flaggon and Higher Town, standing stones are found at the centre of small cairns, whilst at Gun Hill and Chapel Down standing stones are used to form the sides of stone cists. Whilst these stones are clearly associated with potential burial monuments, without excavation it is impossible to determine their contemporaneity.

Ashbee interprets a large stone incorporated within a house at Halangy Down as a decommissioned standing stone. The surface of this stone is decorated with a pecked out geometric design that he suggests represents as a stylised face (Ashbee 1966, fig.2, 1974 153). A more convincing example of a decorated standing stone, found in a field wall on Chapel Down, represents the face and upper torso of an anthropomorphic figure (Fig.7.13). The base of this stone has been broken off from a larger stone that may once have stood upright upon the Down. Originally interpreted as a Romano-Celtic idol this stone is now thought to represent a Late Neolithic/Early Bronze Age statue menhir (Ashbee and Thomas 1990).

7.1.5 Stone rows

A possible stone row has recently been recorded on Par Beach, located midway along the beach between the high and low tide (Fulford *et al* 1997; Ratcliffe 1990, 22, fig.8 and 9). The site consists of three granite orthostats set along an east-west alignment and with an overall length of 15m. Stone rows have a wide distribution in Britain, with concentration in the south-west upon the uplands of Dartmoor and Bodmin Moor (Barnett 1982; Butler 1997; Johnson and Rose 1994). The location of a stone row on Scilly, within a coastal context, is without precedent and suggests caution.

In 1949, O'Neil carried out the excavation of a prehistoric house on Par Beach in close proximity to the suggested stone row (O'Neil nd.a). During this excavation, O'Neil uncovered two parallel rows of stones running along the beach, between high and low tide; these he interpreted as field boundaries. The lower wall consisted of a single row of orthostats between which sections of coursed walling occurred. The location, description and alignment of this wall matches well with that of the suggested stone row. It is likely that the lower wall identified by O'Neil and the recently identified stone row are the same feature. If this interpretation is correct the higher of O'Neil's wall would now be located beneath sand dunes further up the beach. Based on current data it would seem most likely that this row of stones on Par Beach represents the ruinous remains of a field boundary associated with nearby settlement on Par Beach.

As shown in Chapter 4, the analysis of intertidal peat deposits from Par Beach suggest that these stones were located close to the prehistoric coastline, in an area of saltmarsh, subject to periodic marine inundation (Figs. 4.7, 4.9 and 4.10). An alternative interpretation for these stones is as a seaweed trap, as used on the west coast of Ireland, to collect seaweed for fuel and manure (Herring and Hamilton pers coms). This later suggestion might be supported by a radio carbon date taken from an intertidal peat deposit at the base of one of these stones that has provided a date of 393-616 cal AD (GU-5062; 1570 ± 50BP). Whilst this date demonstrates a relatively recent date for this deposit the stratigraphic relationship between this dated deposit and the stone remains ambiguous (Ratcliffe and Stralker 1996).

The range of monuments found within the archipelago have been outlined above; in the following section will considered them in relation to their location within the island landscape.

7.2 The distribution and landscape setting of Scillonian monuments

This section will explore aspects of the distribution and landscape setting of Scillonian monuments. Analysis will initially concentrate upon Scillonian entrance graves, but themes drawn from this analysis will then be applied to other monuments so that similarities and contrasts within the data can be highlighted.

7.2.1 The distribution and location of entrance graves

Entrance graves occur around the Atlantic coastline of the archipelago where they are a feature of higher ground (Fig.7.14). It could be suggested that the present distribution of these monuments is deceptive, as low-lying sites may have been lost through inundation. The destruction of entrance graves through inundation is unlikely as the amount of land lost through sea-level change amounts to only 15-20% of the present day landmass (the majority of which is from around the islands' coastline). This loss of land to the sea holds two implications for the distribution pattern of entrance graves: firstly, that if monuments were lost through inundation their number is likely to be small and secondly, that any sites lost would originally have been located along the ancient coastline. Furthermore, entrance graves are substantially built monuments yet unlike other archaeological sites, such as houses and field boundaries, they are absent from the present day intertidal zone. It would seem that very few entrance graves have been destroyed by sea-level change and their present distribution accurately mirrors that of prehistory.

Whilst a coastal distribution pattern can be identify for entrance graves they are not evenly distributed throughout the archipelago being absent from islands such as St Agnes, Ganilly and Annett and with restricted distributions, on Bryher and Tresco (Fig.7.14). Similarly, over 40% of these monuments occur in only three locations: Porth Hellick, Kittern Hill, and Samson (Fig.7.14). In order to explore this distribution pattern further we will examine the settings of entrance graves and their relationship to the ancient coastline. When we compare the distribution of entrance graves with the prehistoric environmental data, provided in Chapter 4, it is observed that entrance graves occur in areas of prehistoric heathland (4.18).

The relationship between entrance graves and the ancient coastline

The location of entrance graves in close proximity to the ancient coastline means that the sea is an ever-present element of their settings. One consequence of this location is that inter-visibility between monuments is low when viewed across the interior of the islands' (such as between Porth Hellick Down and Bant's Carn) but high, when viewed over the sea between islands. (such as between Bant's Cairn and Samson) (Fig.7.15).

Whilst proximity to the sea was important in the choice of setting for entrance graves, those locales chosen, did not command the most extensive views over the sea. This is demonstrated by the absence of monuments from locales on the periphery of the archipelago, such as, Shipman's Head Down, Wingletang Down and Peninnis Head, which command the most extensive views over the sea. Instead, entrance graves are sited to command specific and localised views. This pattern of inter-visibility between groups of entrance graves might suggest that particular views over water are being emphasised. For example, a monument on the south-west slopes of Buzza Hill has been located so that it has views across St Mary's Road towards Gugh, but only limited views in other directions (Fig. 7.15). Similarly, inter-visibility between entrance graves on Samson and Halangy Down emphasises St Mary's Sound (Fig.7.15). One possible interpretation of this data is that entry points, such as coastal inlets and bays, are emphasised through the construction of monuments. Before exploring this interpretation further let us consider the orientation of the burial chambers of entrance graves and how this associate to their relationship to the landscape and seascape of Scilly.

7.2.2 The orientation of entrance graves

Past archaeologists on Scilly have recorded the entrance orientations of entrance graves but little or no analysis of the data has been carried out (Hencken 1932, 317-318; Ashbee 1974, 73, fig.7). The data, on which the following analysis is based, was recorded in the field using a handheld sighting compass, and with orientation expressed as if looking out through the chamber entrance. It was possible to record orientations from 59 of the 74 extant entrance graves on Scilly (81% sample). In four instances, where monuments were destroyed or inaccessible, orientations were taken from published and archival plans (Borlase 1752; Grimes 1960; O'Neil nd.h and k).

First, the orientations of entrance graves were plotted as a graph to determine any dominant pattern (Fig.7.16). This graph shows that whilst chambers have a slight preference towards the north and north-east, overall, orientation was arbitrary with no single direction dominating. The orientation of entrance grave chambers was then explored to establish whether orientation was determined by the topographic location monuments (as apposed to cardinal orientation). In order to explore this possibility the view from each monument was recorded from two perspectives: looking out from the chamber and looking into and beyond the chamber.

Analysis of this data showed that when we look out from the chambers of monuments our view was directed over the islands' interior, but that this view was frequently restricted. In part, restricted view was as consequence of the preference for monuments to be located upon hill slopes where entrances inevitably face into the gradient of the hillside. In contrast, when we look into and beyond the chambers of monuments, our view is invariably directed towards the open sea. The important finding of this analysis was that the chambers of entrance graves were consistently visually orientated away from the sea (Fig.7.17). This pattern of orientation was not apparent when we explored chamber orientation in terms of cardinal direction as this abstracted these monuments from their island context. In this way, the arbitrary results produced in Fig.7.16 can be reinterpreted as the combined effect of the distribution of entrance graves around the Atlantic coastline and their being orientated away from the sea. Chamber orientation is thus determined through interplay between individual monuments and their relationship to the prehistoric coastline.

On Normandy Down the chambers of three monuments, arranged in a linear group along a headland are orientated to the west, whilst on South Hill Samson, four entrance graves that follow a sinuous rocky crest on the hills summit, orientate to the north (Fig.7.17). The uniformity of orientation within these groups of entrance graves can be explained through their consistent relationship to the sea created through their common topographic settings.

At other sites such as Porth Hellick Down or Kittern Hill, small differences in the topographical settings of monuments result in variations in chamber orientation. In order to explore this point let us look at Porth Hellick Down in more detail. Porth Hellick Down comprises a tract of rough moorland extending north-south along the summit of a coastal headland; to the east and west the Down falls away sharply to the sea and to the north it is terminated by the impressive granite cliffs and tors of Porth Hellick Point. Seven entrance graves are located along the summit of Porth Hellick Down, from which six chamber orientations were recorded.

Entrance grave 1 (Fig.7.18) is located to the north of the main group, sited upon ground that marks a transition between the relatively flat summit of the down and sloping ground to the east and south-east. The monument has extensive views along the summit of the down but is located too far to the north to be able to view the sea at the end of the headland. The chamber of this monument is orientated to the south-east so that when standing facing its chamber, view is focused towards the sea to the north-west. Entrance graves 3, 4 and 5 are located centrally upon the summit of the Down; their orientation is aligned to the south. In contrast to entrance grave no.1 the prominent view from these monuments is to the north, toward the end of the headland and the sea beyond. Entrance grave 6 is located on a slope to the east of the main group with its entrance facing into the hill slope and orientated to the south-west. The setting of this monument within the landscape limits views to the north, south and west but opens up extensive views across the sea and Porth Hellick Bay to the east and north-east. The final entrance grave (no. 7) is sited on the north-west of Porth

Hellick Down on the edge of a steep slope that falls away to the north and west. The sea and cliffs to the west dominate the view from this monument; however, its location upon the western side of the headland limits its views to the north and east. The chamber orientation of this entrance grave is to the south east. We can interpret the orientation of chambers on Porth Hellick Down as also adhering to a spatial code whereby, entrances are aligned away from the sea when leaving the monuments chamber, but where differences in topography result in variations in chamber orientation.

The orientation of chambers away from the sea can be interpreted as a wish on behalf of their builders to exclude the sea from the interior of these monuments. Such exclusion may relate to taboos relating to the sea as a potentially powerful and destructive force within the lives of islanders and inappropriate to be associated within ancestral remains. However, the sea forms an imposing backdrop to the experience of the monuments suggesting that through the configuration of these monuments the central importance of the sea to the lives of both living and dead islanders was being referenced in there architectural configurations.

The relationship between entrance graves and the sea is further emphasised when we reconsider their boat-shaped chambers. On land, the body is the primary way in which the landscape is experience; in contrast, on the sea bodily experience is mediated through the boat as it carries people across its surface. The boat-shaped chambers of these monuments are entered via their bows whilst their sterns face the open sea, suggesting the landing or stowage of vessels rather than an imminent casting out to sea. This orientation might suggest that rather than these vessels being orientated to send the dead off on a voyage to an after world beyond the islands, they were constructed in order to allow the ancestors to navigate their way across the sea to return to the archipelago, perhaps to give council to the living.

Similarly, entrance graves may be viewed as fanes, constructed to ensure both the safe passage of seafarers and the continued harvest of the sea, with the location of monuments and their particular orientations representing the landward journey of vessels returning from offshore fishing trips. Although speculative it is also possible that the chambers of entrance graves may have actually been constructed around decommissioned boats, that have long since vanished from the archaeological record. Through a combination of the coastal distribution of entrance graves and the orientation and shape of their chambers these monuments reach out beyond the coastline of islands' and into the seascape.

Whilst our isolation of patterning in entrance grave orientation is dependent upon our confidence in modelling the configuration of the ancient coastline, the majority of monuments are found along the Atlantic coastline where sea-level change has had a minimal effect upon coastal morphology. If as argued here, the chambers of entrance graves consistently face away from the sea, could this finding be used to clarify our model of sea-level change and coastal morphology? The consistent north-west/north-north-west orientation of monuments on Arthur may be suggestive of a land bridge between this island and St Martin's and confirmation of deeper open water to the south (Figs.7.17 and 4.12). Similarly, the orientation of entrance graves on North and South Hill, Samson corresponds to postulated intertidal flats and towan to the east and north-east (Figs.7.17 and 4.12). Whilst these observations might hold considerable potential in the future, further environmental analysis and dating of intertidal deposits is required before we can convincingly pursue this theme in detail.

7.2.3 Monuments, locales and movement on the sea

Chapter 6 demonstrated how it was possible to identify and reconstruct ancient landing places and entry points within the archipelago. In order to further discussion of the landscape setting of entrance graves, the distribution of these monuments has been plotted onto a map showing these potential entry points and landing places (Fig.7.19).

Initial approach to the islands from the mainland would have been from the north-east. We can rule out a western or southern approach to the islands, as this would have to contend with the innumerable rock pinnacles, ledges and dangerous currents that comprise the Western Rocks. Once within the relatively sheltered water of the eastern seaboard of the islands, access to the interior would be channelled through either Crow Sound or St Mary's Road to the west, or through the deep water channel of Tean Sound to the north (Brandon 1999; British Admiralty 1998, 2001).

These entry points into the archipelago Crow Sound, St Mary's Road, St Mary's Sound and Tean Sound – correspond well with the distribution of entrance graves. The implication here is that the location of entrance graves mark out movement on the sea and in particular approach and entry into the archipelago. Within this interpretive framework the absence of monuments within locales such as, Wingletang Down, Annet and Shipman's Head can be accounted for as these locales are associated with exposed coastlines, which offer little shelter or harbourage and were sea-borne movement would be restricted (Brandon 1999). The presence of entrance graves on: Arthur and Innisidgen mark an eastern entry into Crow Sound; monuments on Gugh, the western limit of an eastern approach into St Mary's Road; monuments on Samson, the western limit of a southern approach into St Mary's Sound and monuments on White Island, Tean and St Martin's, a northern approach into Tean Sound (Fig.7.19). Similarly, the high concentration of entrance graves along the eastern coast of St Mary's might relate to the importance of this coastline as the first landfall encountered during a crossing from the mainland.

As well as marking entry points into the archipelago, landing places such as Porth Hellick Bay and Porth Conger appear to be emphasised by the location of entrance graves By marking out these locales through the construction of burial monuments the significance of these places was highlighted through the powerful presence of ancestral remains. Through such associations the significance of landfall and safe passage on the sea was articulated upon the outset and conclusion of each a voyage. Equally, by emphasising these locales, through the construction of monuments, connections are highlighted between the seafaring activities of the living and the past seafaring activities of ancestors.

When the distribution pattern of entrance graves and prehistoric settlement is contrasted, notable differences are shown (Figs.6.2 and 7.14). The major divergence in these patterns is that entrance graves are closely associated with the Atlantic coastline, whilst settlement is concentrated along the inner coastline of the archipelago. This disparity could be interpreted as a polar opposition between an outer world associated with the dead and an inner world of the living. Whilst this interpretation might be justified, the relationship between these distribution patterns may suggest that through the location of the ancestors at entry points to the islands they guide the living through the dangerous off-shore waters of the Atlantic. In other worlds, on the sea the ancestors guided the living to the safety of harbour.

Whilst the landscape placement of entrance graves provided a powerful visual discourse for activity on the sea it would be misleading to suggest that all of these monuments are visible from the sea around the islands. Whilst an attempt was made to establish which of these monuments was visible from the sea, the sea-based logistics of this proved beyond the scope of this research project. What was made clear during fieldwork was from the sea that the most significant elements of the island landscape were the granite tors that punctuate the archipelago's Atlantic coastline. In order to explore further the significance of the coastal distribution of entrance graves we shall now briefly turn attention to these tors and their relationship with entrance graves.

7.2.4 Scillonian entrance graves and their association with granite tors

Granite tors are found along the Atlantic coastline of Scilly where they dominate cliff tops and headlands. These tors have been mapped and characterised by Mitchell and Orme (1968) and Scourse (1986). Scourse identifies four types of tor: horizontal, vertical, hill-slope and eroded, each type relating to variations in their geological formation, exposure and erosion (1986, 81, fig.31). Whilst tors have a wider distribution within the archipelago than entrance graves notable correlations occur (Fig.7.20). Before exploring the divergence of these distribution patterns let us first look at how entrance graves relate to tors.

The relationship between entrance graves and tors was recorded in the field and the results are presented here in tabular form (Fig.7.21). This fieldwork demonstrates that entrance graves are consistently located in close proximity to tors. For example, at Upper Innisidgen an entrance grave is located ten metres inland from a tor known as Innisidgen Carn, whilst a second located below the first is associated with a large tor on the end of a coastal bar called Innisidgen Isle (Fig.7.22). Similarly, close proximity is also apparent on Tinker's Hill, Gweal Hill, Middle Arthur and Works Carn, (Fig.7.22). At other locales, such as on Samson and Cruther's Hill monuments are located along sinuous rocky spines of granite that dominate the summits of hills.

Through the construction of entrance graves in close proximity with tors, their builders were highlighting the importance of such features to the everyday world of prehistoric Scillonians. The significance placed upon coastal tors can be further recognised at a small number of sites through the intentional deposition of artefacts. At Yellow Rock Carn an urn was found within a crevice of a tor (Lewis 1948,7), whilst at English Island Carn a Late Neolithic/ Early Bronze Age dolerite shaft-holed adze and urn was similarly found (Ransom 1984, 194). At Carron Rock's, St Martin's a bronze dagger and comb-impressed urn appears to have come from within a tor and at Block House, Tresco, a stone mace head was found immediately below a rocky prominence (Ashbee 1974; Hencken 1932; Lewis 1948; Ratcliffe 1989).

Granite tors and prehistoric wayfaring

If the location of entrance graves relates to movement on the sea and particularly to entry into the archipelago, we can postulate that only those tors that were significant to these sea routes were emphasised through the construction of monuments. In order to develop this argument further we must briefly leave the *terra firma* and explore the islands' from the sea.

Archaeologists identify movement and journeys within a landscape, through the identification of significant cultural features such as settlements, burial monuments etc. and how these features may have potentially structured the experience of movement and the creation of pathways. Whilst physical obstacles such as mountains, cliffs, rivers etc. restrict movement within the landscape, archaeologists tend to place emphasis upon cultural constraints such as the correct way to move along a stone row of enter a stone circle (Thomas 1993b; Tilley 1994, 1996).

In contrast, movement on the sea around Scilly is primarily structured by the cyclical patterns of tide (British Admiralty 1998). These tidal cycles form a predictable temporal pattern of movement around the archipelago that both restricts and facilitates local movement on the sea. Safe passage, entry and pilotage within the archipelago are primarily carried out through the accurate prediction and identification of tidal currents and wayfaring points. Although, today lighthouses and marker buoys aid wayfaring, natural landmarks, such as tors, remain the principle means by which seafarers locate themselves within the islands' dangerous waters. Evidence for the present day and historical importance of coastal features (many of which are only apparent from the sea), such cliffs, inlets, tors and islets, is illustrated through the naming of these features, upon maps and charts (Thomas 1979d).

On Scilly, tors form the most visible elements of the island landscape, many of which can be picked out and identified from many kilometres offshore (Brandon 1999). The importance of such wayfaring points for seafaring is clearly demonstrated in their inclusion on both modern and historical charts and pilot guides (Brandon 1999; Corporation of Trinity House 1749, 1808; Rowett 1869; British Admiralty 2001). Of particular importance, are pilotage guides produced for the training of navigators for the islands' tourist and fishing vessels (Fig.7.23). These guides clearly demonstrate the importance placed upon local knowledge such as the correct identification of landmarks in order to avoid dangerous rocks and currents and to locate important locales within the seascape, such as holes within the seabed into which lobster or crab pots are placed (www.scilly.gov.uk/boating). Through wayfaring a detailed and intimate knowledge of both the surface and seabed topography is directly informed through the correct identification of significant landmarks.

In prehistory, everyday activities on the sea around Scilly, such as fishing, would primarily have been carried out within coastal waters. In these waters, the tors and outcrops that encircle the Atlantic coastline of the islands would have provided the most prominent wayfaring points. Through an intimate knowledge of the island landscape and its shifting perspectives prehistoric Scillonians would have acquired knowledge of the sea and through this process, the sea would have become invested with significant locales and seaways. Tors would have played an important role in this socialisation of the sea and in turn may have been invested with stories and myths.

Similarly, individual tors may have become associated with sea tenure, ancestral fishing grounds, pilotage routes and mythological events upon the (Cordell 1989). Whilst the precise location of significant locales within the sea cannot be reconstructed, through the identification of prominent coastal landmarks, embellished through the construction of monuments, we can appreciate the potential practical, social and symbolic importance that these locales might have held.

Through the construction of monuments containing ancestral remains within these locales, lineages were drawn out between prehistoric islanders, ancestors and safe passage upon the sea. The entrance graves therefore represent a material confirmation of the social relationships between people and places. The significance of coastal tors on Scilly is associated with movement on the sea and this significance predates the construction of entrance graves (perhaps dating back to the Mesolithic) but through the construction of monuments the knowledge and significance of these tors became socialised and embedded within the lives of prehistoric islanders.

7.2.5 The distribution and landscape setting of cairns

The distribution of cairns on Scilly share similarities to entrance graves, with both monuments found predominantly on high ground around the Atlantic coastline. Whilst similarities occur, the overall distribution pattern between these monuments is different. Most significantly, cairns occur in large cairnfields on exposed headlands around the periphery of the archipelago. The location of cairns around the periphery of the archipelago is emphasised further by the presence of cairns on small, barren rocky islets such as Menawethel and Round Island (Fig.7.24). When comparison is made between the distribution of cairns and available prehistoric environmental data, for the archipelago (as outlined in Chapter 4), it can be seen that cairns occur within areas of prehistoric heathland.

The majority of cairns occur within four large cairnfields at: Shipman Head Down, Castle Down, Chapel Down and Wingletang Down (Fig.7.24). Smaller cairnfields are located on Gugh and Salakee Down, whilst a further (now largely destroyed) cairnfield may have once existed on Peninnis Head. The largest of these cairnfields is located on the exposed headland of Shipman Head Down on the north end of Bryher. This cairnfield comprises 134 cairns arranged in both clusters and rough alignments that follow slight ridges or contours. This cairnfield is located upon the highest and most exposed part of the headland

within a zone enclosed by the 20m contour. This location maximises views towards the impressive tors of Shipman Head to the north and across the open Atlantic to the west.
The second cairnfield is on Castle Down, where it is distributed along the highest contours of the headland. It comprises 78 cairns with the highest concentration being to the north. The distribution of cairns along Castle Down are aligned towards the open sea to the north-west, but positioned so that views are restricted to the east by Tregarthen's Hill and to the north-east by Castle Brow. The cairnfield's orientation to draws attention towards the north-west and the open Atlantic.

The third cairnfield is on Wingletang Down, and comprises of 43 cairns. Here cairns are concentrated within an area to the north-east of the down. This area is the highest location on the down and provides panoramic views over Wingletang Head and the open sea beyond. At the remaining five cairnfields (Chapel Down, Kittern Hill, Clapper of Works Down, Peninnis Head Down and Salakee Down), a similar scenario occurs with cairns occupying exposed headlands that maximise their views overlooking the sea.

Contrasting the distribution patterns of cairns and entrance graves

Whilst both cairns and entrance graves are associated with the Atlantic coastline, cairns are found predominantly within large cairnfields on the extremities of the archipelago, such as upon Shipman's Head Down and Wingletang Down, where entrance graves are not found, (Figs.7.14 and 7.24). On Samson the distribution pattern of cairns and entrance graves share a common setting, aligned along the rocky summits of the island's north and south hills. Here the distribution of cairns may emphasise an already established spatial code or may relate to a very different logic, such as the importance of placing the dead around the outer exposed perimeter of the islands. The latter interpretation would suggest that the convergence of distributions merely represents a spatial overlapping of two distinctively different spatial rationales.

I have argued previously that the location of entrance graves emphasises pilotage routes and entry points into the archipelago and that this distribution might relate to prehistoric seafaring and wayfaring. In contrast, cairnfields are located predominantly within locales that overlook exposed rocky Atlantic headlands that would have been un-navigatable to boats in all but perfect conditions. In other words, in contrast to entrance graves, the locations of cairnfields do not appear to emphasis significant landmarks, visible from the sea, used by prehistoric seafarers. I am not suggesting here that the sea was of less significance to the builders of cairnfields or that wayfaring on the sea less important. Entrance graves and the landmarks that they emphasised would have continued to be used by prehistoric seafarers as wayfaring points and from evidence from their chambers were reused for the purpose of burial well into the second millennium BC (thus overlapping with the construction and use of the cairn fields).

As stated earlier, the change from the burial of the dead within entrance graves too burial below cairns was associated with a change in burial practice from communal to individual internment. Rather than burial monuments being associated with membership of a family group in which differences in status were hidden through communal burial, individual identities and kinship relations were emphasised through individual burial and through their spatial relationships to other burials within cairnfields. Whilst, group identity continued to be articulated through movement on the sea and through the correct interpretation of older monuments, the dead were now placed within locales whose significance was drawn from their positions on the periphery of the archipelago at the physical and metaphorical boundary between land and sea. These headlands are characterised by the presence of the most dramatic coastal tors and cliffs within the archipelago, formed by the constant bombardment of waves and wind. At the end of two cairnfields, Salakee Down and Shipman's Head Down, dramatic tors are enclosed within Iron Age cliff castles. At Shipman's Head Down a large wall of boulders, held in position by orthostats, separates this headland from the rest of the islands whilst at the Giant's Castle a series of three walls separate a small area of the headland from the rest of the island. No evidence of settlement has been found inside these enclosures and it would appear that their primary function was for the demarcation of these impressive cliffs and coastal tors. Through the placement of the dead within these locales, cairnfields highlight a landscape placed between the worlds of: the land and the sea, and the living and the dead.

The orientation of cists

From the hundreds of cairns present on Scilly the orientation the cists could only be recorded in ten instances (Fig.7.25), therefore interpretation of the significance of orientations is limited. The orientations of cists were recorded from a combination of measurements taken (with a handheld sighting compass) during fieldwork and through the examination of archival plans and field notebooks (O'Neil nd.a, nd.k; Smith 1863). Cist orientations were recorded along their longitudinal axis.

The small size of this sample makes it impossible to determine whether any predominant orientation existed throughout prehistory or whether their location in relation to island topography was significant. From the limited data collected, it was demonstrated that, whilst a degree of variation occurs, there is a preference for cists to orientate north/south (Fig.7.25). When we compare the orientations of cists with that of entrance graves a contrast can be observed. Confirmation of this contrast can be detected within locales where both monuments occur in close proximity to each other, such as upon Gweal Hill, Little Arthur and North Hill, Samson. Here the orientation of these monuments is markedly different. This divergence might relate to a new emphasis during the 2nd millennium BC to cardinal orientations, such as the fixed position of the sun or moon at the mid point of their daily cycles. This emphasis upon cardinal orientation is in contrast to that of the burial chambers of entrance graves that relate to the proximity of the coastline. Whilst differences between the orientations of cists and entrance graves might suggest a different rationale behind their configuration, a larger sample is required to provide a meaningful interpretation of the data.

The relationship between cairnfields, settlement and boulder walls

Some of the cairns within cairnfields have been interpreted as agricultural clearance mounds. This interpretation has arisen through their association with boulder walls that connect together cairns such as those found on Shipman Head Down and Kittern Hill (Ratcliffe 1994; Thomas 1985). These downs are the most barren and exposed places in the archipelago and are unlikely to ever have been exploited for agriculture (Lousley 1971).

The sequential relationship between cairns and walls on the downs is difficult to determine and might only be clarified through excavation. However, field survey on Kittern Hill, suggest that the walls post-date the construction of the cairns. Here, walls connecting monuments are predominately constructed of orthostats, between which short stretches of coursed boulder walling occur. When we look more closely at the construction of these walls, and at their physical relationship to cairns, a number of observations can be made.

- Sections of walls adjacent to cairns are constructed of large and regularly shaped blocks of granite; whereas sections of walls further away from cairns comprise of smaller granite boulders.
- Cairns linked together by walls invariably have missing kerbstones.

It can be interpreted from these observations that the kerbstones from these monuments were removed to construct the linking walls and, that at least on Kittern Hill, these walls post date the construction of the cairns.

Overall, the distribution of cairns along the periphery of the archipelago is in marked contrast to the distribution of settlement. However, settlement to the North of Tregarthen's Hill is in close proximity to the cairnfield located here upon Castle Down. Settlement here connects to the cairnfield via a series of boulder walls similar to those described upon Kittern Hill. Unfortunately, available data does not allow us to determine the contemporarily between this settlement and the cairnfield, although it is likely that this settlement post-dates the cairnfield. This settlement is the only example on the islands' where close proximity with cairns occur, as such, it is likely that this settlement belongs to a later period of prehistory when the spatial separation between the realm of the dead and the living was broken down. As we shall see in our consideration of Porth Cressa cists on Scilly, this new relationship between settlement and burial appears to have occurred during the later half of the first millennium BC.

7.2.6 The distribution and landscape setting of Porth Cressa Cists

The distribution of Porth Cressa cists on Scilly is restricted to the five islands of St Mary's, St Martin's, Tean, Bryher and Samson, were they are found on low-lying ground, adjacent to the ancient coastline (Fig.7.26). These monuments are frequently found within the present day intertidal zone shrouded beneath sand. Because of their location within the intertidal zone, it is likely that others remain to be discovered. When the distribution of Porth Cressa cists is considered in relation to the ancient coastline, it can be observed that they are typically associated with bays and inlets along the inner coastline of the archipelago. The close proximity between these monuments and the ancient coastline is demonstrated at Toll's Porth where a Porth Cressa cist was dug into an ancient sand dune (Ashbee 1999, 23). The location of these monuments close to the prehistoric shoreline suggests that they were constructed in areas of prehistoric saltmarsh or towans. This environmental setting is confirmed at Par Beach from the analysis of intertidal deposits (see Chapter 4) that suggest this area to have been subjected to periodic marine inundations.

This distribution pattern is markedly different to earlier burial monuments, but shares similarities to the distribution of prehistoric settlement (Fig 6.2). In a number instances, such as at Poynter's Garden, Parson's Field and Toll's Porth, cists are associated with contemporary settlement whilst at sites: Lawrence Brow, East Porth and Bonfire Carn, they are associated with older and abandoned settlements. On Par Beach, four cists are located amidst settlement, one of which was placed inside the remains of an abandoned house (Ashbee 1974, 180, fig.39; O'Neil nd.c).

This distribution suggests that by the Late Iron Age, changes occurred in attitudes towards the disposal of the dead, whereby, ancestral remains were placed in close proximity to settlement. On the mainland, a similar shift in Iron Age burial practices occurs within cist cemeteries such as Harlyn Bay and Trevone, where burials are found in close proximity to contemporary settlements (Dudley and Jope 1965; Whimster 1977, 1981).

The previous chapter argued that the location of prehistoric settlement in close proximity to bays and landing places might be suggestive of the practical and symbolic role that such places played within the daily lives of prehistoric islanders. Through the placement of the dead within these locales, these places are further emphasised firstly, through the deposition of ancestral remains and secondly through there close proximity to settlement. Kinship relations articulated through the placement of individual burials in relation to one another were for the first time visibly associated with the remains of settlement, thus drawing direct connections between both the living and ancestral occupants of particular settlement locales. This close relationship between burial and settlement is evident on the mainland, in southern central and south-west Britain, by the Middle Bronze Age, in the occurrence of urnfields, but on Scilly is not archaeologically evident until the Late Iron Age.

Orientation of Porth Cressa cists

The orientations of the longitudinal axis of 33 Porth Cressa cists were recorded. Only in one instance was recording made in the field, with the remaining taken from published and archival sources (Ashbee 1954, 1979, 1999; Dudley 1960-1961; O'Neil nd.a, nd.k). The result of this analysis demonstrated that, within a few degrees, Porth Cressa cists are orientated along a common north/south axis. This consistency in orientation suggests the use of a single cardinal orientation that is in marked contrast to that found within entrance graves. The identification of a common cardinal orientation suggests that rather than orientation being taken from local factors, such as relationship to the ancient coastline, orientation was taken from a fixed reference point such as the position of a celestial or astronomical body. One possible interpretation is that this orientation places the dead at a midway point between the rising and setting of the sun, metaphorically at the transition between the world of the living and a world of the ancestors.

In contrast to the majority of other prehistoric monuments on Scilly, human remains have been identified within Porth Cressa cists. Of the 33 Porth Cressa cists identified human remains are only sufficiently well preserved, to allow for the accurate recording of burial orientations, in nine instances, at: Parson's Field, Poynter's Garden, Hillside Farm and Par Beach (Ashbee 1954, 1979; Dudley 1960-61; O'Neil nd.a; Johns pers.com). Whilst this sample is too small to provide any definitive statement on the significance of orientation, it allows us an insight into the potential complexity of Scillonian Late Iron Age burial practices.

When we look at the orientation of burials within Porth Cressa cists, it can be seen that burials were placed with their heads facing to both the north and south and placed upon either their right and left sides (Fig.7.26). The best evidence for this variation comes from the cist cemeteries of Parson's Field and Poynter's Garden, both of which are located upon the lower slopes of Garrison Hill. Poynter's Garden is located on the south-eastern slopes of Garrison Hill overlooking Porth Cressa Bay whilst Parson's Field is on the north-eastern slopes overlooking St Mary's Harbour. From Poynter's Garden the orientation of four burials were identified all of which were orientated with their head facing north and placed upon their right sides. In contrast, at Parson's Field the orientations of three burials were identified, all of which were orientated with their head pointing south and placed on their left sides.

It is unclear whether Parson's Field and Poynter's Garden are separate cemeteries, or a single large cemetery on the lower slopes of Garrison Hill. Either way, we need to account for the apparent differences in burial orientation between the two sites. If we assume that these difference relate to social distinctions made within the island community, perhaps related to gender, age or social status, then we must assume that particular areas of the cemetery were socially segregated.

Another possible interpretation is that differences in orientation between these cemeteries relates to the their relationship to the sea, and particularly to the bays above which they are located. In both cemeteries, burials are orientated so that their heads face inland whilst their legs face the open water of the bays. At the remaining two sites of Par Beach and Hillside Farm were the orientation of burials has been recorded a similar pattern can be seen where burials are orientated with their heads pointing inland. Whilst we cannot make too much of such a small sample it is possible that whilst the orientation of Porth Cressa cists was determined by a single cardinal orientation the placement of burials within these cists may have been influenced by more localised factors such as relationship to the island landscape.

7.2.7 The distribution and landscape setting of standing stones

Standing stones are found on the islands' of Gugh, St Martin's and St Mary's where they are located along the inner coastline a distribution pattern that emphasises the north and eastern coastlines of the archipelago (Fig.7.27). Of the nine standing stones recorded on Scilly seven remain upstanding; a fallen stone on Cruther's hill lies close to it's original position whilst a stone incorporated into a house at Halangy Down is thought to have been brought to this site from elsewhere (Ashbee 1966).

The location of standing stones along the inner coastline emphasises their visibility from the sea between the islands whilst reducing their visibility from offshore waters. The environmental data outlined in Chapter 4 suggests that standing stones were located in areas of prehistoric heathland (Fig.4.18). Standing stones are most frequently found upon hills such as Cruther's Hill and Mount Flagon, here they are false crested to emphasise their view from the sea below rather than from across land. Their coastal distribution and location just below the summits of hills emphasises visibility from the sea, where they appear silhouetted against the horizon.

The use of standing stones as wayfaring points in modern times is supported by their inclusion on British Admiralty charts and pilot guides (Brandon 1999; British Admiralty 1998, 2001; Norm 1980). This is best illustrated at Mount Flaggon where an official navigation mark (locating safe passage into St Mary's Pool), has been constructed adjacent to a standing stone (Fig.7.28). Similarly, the Old Man of Gugh is used as a local navigation mark to guide safe passage into St Mary's Sound and Cruther's Hill as a leading mark for entry into Crow Sound (Brandon 1999; Norm 1980). The location of these standing stones, interpreted in light of recent wayfaring within the archipelago, would suggest they mark out an easterly approach to the archipelago channelled within either Crow Sound to the north or St Mary's Sound and St Mary's Road to the South (Fig.7.27). In light of this interpretation we can suggest that the restricted distribution of standing stones to the east of the islands may relate to the importance of this direction for entry into the archipelago.

The use of standing stones to mark out and emphasis entry points into the islands is best illustrated on St Martin's where they emphasise an eastern approach into Crow Sound (Fig.7.27). A stone located on the southern slopes of St Martin's stands only 1.5m in height and appears insignificant when viewed from the land but when viewed from Crow Sound appears as a prominent landscape feature punctuating the skyline of the island. Similarly, small standing stones on Gun Hill and Chapel Down become prominent landmarks when viewed from the sea within Crow Sound.

The consistent placement of standing stones in relation to the sea and their visibility from the sea suggests that one of the functions of these monuments was to locate and orientate people on the sea. The anthropomorphic shape of standing stones, combined with evidence that at least some where decorated with pecked faces, suggests that they may have represent ancestral beings (Fig.7.13). The placement of these stones at key points within the island landscape, that emphasise departure and return from the archipelago might suggest that these stones were placed within these locales to bring protection to seafarers setting out to sea and welcoming their safe return.

Conclusion

This section has shown that the prehistoric monuments of Scilly have different distributions and settings within the island landscape. It has argued that whilst monuments on Scilly are intimately related to the sea, this relationship varies between monuments. For entrance graves and standing stones this relationship appears to relate to coastal wayfaring and activities on the sea. In contrast, the coastal distribution of cairns emphasise the outer periphery of the archipelago.

This contrasting distribution is further emphasised through their spatial relationship to natural features of the landscape, most notably granite tors. Through this proximity, each entrance grave is associated with a particular point within the landscape, readily visible from the sea that may have functioned as a wayfaring marker. The relationship between cairns and tors is different to that of entrance graves in that cairnfield are located along headlands terminated by massive tors used as a dramatic background to their location. In contrast, the distribution of Porth Cressa cists is markedly different from early monuments in that they occur along the inner shoreline of the archipelago where they are associated with settlement.

7.3 Scillonian monuments as natural places

As shown earlier entrance graves and cairns occupy locations around the Atlantic coastline of the archipelago that are characterised by rocky landscapes dominated by coastal tors and cliffs. Entrance graves through close proximity to tors emphasise particular significant locales along the coastline whilst cairnfields use the dramatic tors at the end of headlands, where they provide a backdrop that emphasises their peripheral location on the boundary between the land and sea. What I would like to concentrate on in this section, are not the major tors but the large earth-fast grounders and clitter (boulder and stone spreads found down slope of upland tors) that also characterise these locales. In this section, we will examine how entrance graves and cairns emphasise natural elements of the island landscape through their incorporation of earth-fast granite grounders. Through the inclusion of earth-fast grounders in cultural constructions boundaries between a cultural and natural world are eroded. This section will explore evidence for the incorporation of the natural world within Scillonian monuments and the significance of this incorporation for an interpretation of the island landscape.

7.3.1 Culture and Nature

Through the study of the incorporation of the natural world within Scillonian monuments, we engage with an ongoing debate within archaeology and anthropology into how distinctions are made between a cultural and natural world (Ellen and Katsuyoshi 1996; Tilley and Hamilton *et.al* 1999). This research argues that distinctions drawn between the natural and culture world are a product of western Enlightenment thought that has brought about the 'othering' of nature (Williams 1976). Ethnographic data suggests that in many small-scale indigenous societies, no linguistic term exists with which to separate the natural environment from society and that humans are enveloped within the world rather than being in some way separated and opposed to it (Tilley and Hamilton *et.al* 1999). In this way, a continuum exists between such things as humans, plants, rock formations, animals, ancestors, spirits and substances (Roe and Taki 1999).
Within archaeology, research carried out upon the granite uplands of south-west Britain have been at the forefront of this debate. On Bodmin Moor, and at other locations within the south-west, the occurrence of 'tor cairns' mark a specific way in which natural elements of the landscape have been en-culturated and given significance. At Showery and Catshole Tors (two dramatic tors on Bodmin Moor), cairns have been constructed around these rock formations thereby highlighting and signifying them as significant places (Johnson and Rose 1994; Tilley 1995b, 1996b).

Similarly, Bradley (1998a) has drawn attention to the similarity in the physical appearance of megaliths and tors upon upland areas of West Cornwall. He argues that to the people who lived in these areas during the Neolithic, some tors were construed to be megalithic tombs, constructed according to a tradition that retained its importance within that society (Bradley 1998a). Bradley is not arguing that prehistoric people were mistaken in their interpretation of the world but rather that the conception of what is cultural and what is natural within the landscape is a product of recent research that has developed into the modern disciple of geology (Bradley 1998a: 20).

Whilst I acknowledge that our present day distinction between culture and nature are the result of a particular cultural and historical understanding of the world, for the purpose of analysis we need to draw such distinctions. I will argue that through the incorporation of earth-fast boulders within monuments, the significance of particular elements of the natural world were emphasised

7.3.2 Earth-fast grounders within Scillonian monuments

Whilst the majority of entrance graves and cairns incorporate earth-fast boulders in their construction, past archaeological research on Scilly (with the exception of Ashbee 1974, 83-84) has failed to record their presence and significance (Daniel 1950; Hencken 1932, 1933). This omission includes plans drawn of monuments that deliberately exclude all stone know to be natural. For example, the plans of an entrance grave, known as Peter's Barrow' on Porth Hellick Down, does not show a large natural grounder that forms a large percentage of the monument (compare Fig.7.29 no.c with Hencken 1932, 25 fig 11A). The exclusion of natural from this and other plans is confusing as it is difficult to reconcile the appearance of monuments in the field with their drawn plans. This omission was not because of a failure by the draughtsman to recognise these features as natural, but because it was only considered appropriate to record cultural features within archaeological drawings.

In order to proceed with our analysis we must begin by distinguishing between cultural and natural stone within entrance graves and cairns. In the majority of instances on Scilly natural grounders are readily distinguishable from culturally placed stones because of their size and degree of in-situ erosion. In other instances, archaeological and geomorpological criteria is required to distinguish between natural and culturally placed stones (Sellier 1991; Tilley and Hamilton *et.al* 2000).

When monuments were open to examination it was relatively straightforward to demonstrate the presence of grounders, but in other instances where monuments are covered in turf and impenetrable vegetation, interpretation was limited. My survey of entrance graves on St Mary's shows that 90% show evidence of the incorporation of natural grounders. These results are supplemented by a limited survey of cairns and entrance graves throughout the archipelago that suggest that here also a large percentage contain earth-fast grounders. Whilst this data does not suggest that all entrance graves and cairns contain grounders, it indicates that the incorporation of grounders was not uncommon and may even be a typical a characteristic of these monuments.

In entrance graves and cairns, these grounders are incorporated in a variety of ways: as a central focus of a monument; used to form a section of kerb; incorporated within the monuments chamber (Figs.7.29 and 7.30). It might be argued that this recurrent feature of monuments simply represent a pragmatic utilization of available resources; minimizing the amount of building material required in their construction. However, a closer examination of how these stones are arranged within monuments suggests a degree of structure and intention.

Both entrance graves and cairns are constructed around natural grounders. In a few instances, the grounders incorporated are substantial and would have been clearly visible within the monument after construction. The most striking example of this occurs on Castle Down where a large grounder, known as the Borlase Altar, is incorporated within a kerbed cairn (Fig.7.30, no.A). On Porth Hellick Down a large weathered grounder is embedded within the fabric of an entrance grave where it has been used to form the back and one of the side walls of the monuments chamber (Fig.29, no.D). Similarly, a large grounder covered in solution holes, on Wingletang Down, is encompassed within a kerbed cairn (Fig.7.29, no.B). At Knackyboy Cairn, the back and part of the northern side of the chamber is formed by an abutment against a large grounder (O'Neil 1952, Pl.XV) whilst on South Hill, Samson the lower part of the chamber of an entrance grave is formed by a grounder around which the monument was constructed (Ashbee 1974). Whilst at Hillbenigates (also known as Flat Rock Hill) a cairn containing a cist was been constructed directly on top of a large grounder, with the burial chamber constructed within a natural hollow in its surface (O'Neil nd.e).

In each of these instances, specific grounders can be interpreted as having been selected because of their ideological significance within the landscape and embellished through the construction of monuments around them. The incorporation of these outcrops within monuments marks a specific way in which natural elements of the landscape have been en-cultured and given significance. One consequence of the incorporation of grounders within monuments is that they mimic the natural geology of the landscape in which they are constructed. Along the western seaboard of Wales, Cummings has also noted the similarity between Neolithic burial monuments and the natural features of their landscape setting. (Cummings 2002). Many entrance graves and cairns on Scilly physically resemble natural geological features, an effect emphasised through the visible presence of earth-fast grounders within their construction. This is particularly true of monuments constructed within clitter streams or placed on top of hillslope tors. For example, an entrance grave on Porth Hellick Down has been constructed within a clitter stream that has been utilised to enclose the monument within a natural kerb (Fig.7.29, no. E), whilst at Works Carn on Bryher an entrance grave has been placed directly on top of a hill slope tor, much of which is incorporated within the structure of the monument (Fig.7.31).

The material from which entrance graves and cairns are constructed come from a number of sources, such as:

1. Natural earth-fast boulders, clitter streams and tors that have not been modified by human action.
2. From soil, rubble and stones dug up and collected from around the monuments and used in their construction.
3. From stones selected and removed from tors and clitter streams and then incorporated within monuments.

Whilst 1. can be interpreted as wholly natural in origin, 2 and 3 are derived from the cultural process of creating monuments through altering the natural environment. The selection of particular stones to be incorporated within monuments is of particular interest and will be explored here in reference to entrance graves.

7.3.3 Rearranging nature: entrance grave reconstruction

It was argued above that through the incorporation of earth-fast grounders many entrance graves and cairns physically resemble natural elements of the island landscape. I will argue here that through the construction of monuments, and in particular, through the selection and organisation of culturally placed stones, entrance graves not only physically resemble natural features such as tors and clitter streams but also are a cultural reworking of them.

In order to justify this statement we need to identify the source of the stone used to construct entrance graves and how these were incorporated within monuments. Sellier (1991), in her study of the Carnac alignments, has demonstrated that it is possible through the study of the shapes and patterns of erosion on menhirs to determine their geological history and origin. She sets out criteria that can be used to define differences between pre-megalithic erosion and erosion caused by recent exposure. This is achieved by identifying patterns of geological erosion, such as fissures and solution holes, the results of the long-term exposure of granite surfaces to wind and rain. The presence of solution holes demonstrate that granite blocks were once orientated horizontally within a tor or clitter stream. Similarly, the presence of deep channels and striations upon granite surfaces denote a vertical orientation (Mohen 2000; Sellier 1991). Further distinctions in orientation can be determined by noting differences in erosion on opposite faces of granite blocks. Thus, a block with evidence of solution holes on one surface and a fresh un-weathered surface on the reverse, demonstrates that it was originally placed horizontally with only one surface exposed to erosion (such as from the top of a tor). Using these techniques it is possible to determine from where culturally placed stones, used in the construction of entrance graves, might originate and how these have been rearranged within monuments.

The stones used in the construction of entrance graves are derived from tors and clitter streams from around the Atlantic coastline. The largest and most accessible stones for study, used in the construction of entrance graves, are capstones. These stones were examined in the field to identify whether any pattern could be identified in their arrangement within monuments. Only 26 entrance graves (36% of database) could be surveyed for evidence for patterns of weathering, as in the majority of cases capstones are missing and chambers overgrown or filled with soil and rubble. The results of this survey showed that the capstones of entrance graves examined were consistently arranged with their weathered surfaces facing outward and their un-weathered surfaces facing inward. This rearrangement is most clear at Obadiah's Barrow where the exterior surfaces of the capstones are heavily weathered with solution holes and runnels, whilst the inner surfaces are relatively unweathered. We can surmise from this that the outer faces of these capstones have been exposed to weathering for an exceptionally long time and that these stones were originally orientated horizontally upon a tor or clitter stream. The inner, un-weathered, face of these capstones represents the jointing plane from where these leticular blocks of granite were removed from tors or solifluction deposits, before incorporation within monuments. Other large granite blocks used in the construction of entrance graves (such as those used to construct monument chambers and kerbs) are more difficult to interpret, as only one face is available for inspection. However, a survey of 22 entrance graves (23 % database) showed that internal chamber walls were consistently formed of un-weathered granite surfaces.

The reorganisation of these stones within monuments, mirrors their organisation within nature. Through this organisation we can argue that the construction of these monuments represents the physical and symbolic embodiment of tors, grounders and clitter streams. Entrance graves are thus a physical and cultural reworking of nature constructed to conform to a particular understanding of the landscape.

7.4 A final note

This chapter has considered the landscape context of Scillonian burial and ceremonial monuments. It has considered the variety of monuments found within the archipelago their classification and use. Comparisons between the distribution and settings of monuments were carried out in order to highlight similarities and contrasts.

In the next chapter we will explore evidence for imports so that we might assess the degree to which the islands were isolated from contact with prehistoric communities from the beyond the shores of the archipelago.

8: EXPLORING ISOLATION AND INTEGRATION ON SCILLY

There is an implicit assumption within the archaeological literature of Scilly that the islands were isolated from outside contact during prehistory and that because of this, a distinctive material culture, different from the mainland developed (Ashbee 1986; Thomas 1985). The assumption here is that isolation led to insular difference and that the mechanism for this difference was environmentally determined.

8.1 Scillonian isolation?

The hypothesis that Scilly remained isolated from outside contact during prehistory rests upon two assumptions:

- That prehistoric mainland and island communities would not have had the technology and knowledge of seafaring to make the 45km voyage between Scilly and the mainland.
- That the material culture of the islands is unique to its shores and suggests insular development.

The first of these assumptions is questionable as a human presence on Scilly from as early as the Mesolithic is testament to contact with the mainland and therefore to the use of boats. Whilst this early contact with the mainland is acknowledged in the archaeological literature, there is an assumption that once these intrepid seafarers landed on the islands they were not capable of returning or at least, movement between the islands and the mainland was extremely rare (Thomas 1985, 142-144). Furthermore, whilst sea-borne movement (even if limited) is accepted for Mesolithic islanders, the capacity for the use of boats is thought to have diminished through time, resulting in the insular developed of Scillonian Neolithic and Bronze Age communities.

As demonstrated in Chapter 4 the presence of boats throughout Scillonian prehistory is demonstrated by the presence of species of deep-sea fish recovered from midden deposits (Figs.4.22 and 4.23) and by the frequent occurrence of fishing gear such as line and net sinkers (Fig.6.18). This evidence suggests that boats would have been used on a daily basis for transport between the islands' and for fishing in both inshore and offshore waters. If prehistoric Scillonians had the technology and seafaring knowledge to fish within offshore waters, there is no reasonable justification for assuming they lacked the capability to cross back and forwards between the archipelago and the mainland. Whilst boats have not been found in either Scilly or Cornwall, evidence from elsewhere in Britain and north-west Europe, confirm that they would have been extremely common, providing a standard tool for daily movement (Johnstone 1980; McGrail 1983, 1998). Furthermore, boats capable of inter-continental travel have been shown to be in wide circulation by the Early Bronze Age (Wright 1990; Wright *et.al* 2001). This research suggests that the 45km channel between Scilly and the mainland would have posed few problems to prehistoric Scillonian mariners (Cunliffe 2001).

The second justification for Scillonian insularity is the presence of material culture unique to the archipelago and therefore assumed the product of insular development. It is true that many pottery forms such as, Late Neolithic/Early Bronze Age comb impressed and cord impressed pottery are not found outside of the archipelago and that burial monuments, such as entrance graves, whilst found in small numbers on the mainland, are much more prolific on the islands. Whilst the absence of Later Neolithic mainland pottery, such as Beakers and Cordoned Ware, on Scilly might superficially suggest a degree of isolation, these pottery forms are also rare in West Cornwall (Mercer 1986; Parker Pearson 1990, 1995). This suggests that the absence of this pottery on Scilly cannot be accounted for primarily as an aspect of island isolation. Similarly, Porth Cressa cists and the aggregated form of Scillonian settlements have mainland comparisons (Dudley 1957; Whimster 1977, 1981). Whilst similarities between aspects of Scillonian and mainland forms of architecture and material culture can be highlighted, other aspects, such as Late Neolithic comb impressed and cord impressed pottery and Middle and Later Iron Age forms of pottery remain uniquely Scillonian. The question here is, was this cultural divergence the result of environmental isolation or active social choice?

Whilst arguing that evidence from Scilly suggests the potential for sea-borne movement, between the islands and mainland, the degree to which the islands were isolated is largely dependent upon the nature of this contact. This aspect of island isolation will be explored below through the identification of imports.

8.2 The identification of imports

In order to access the degree to which Scilly may have been, integrated with, or isolated from, prehistoric mainland communities (and therefore the extent of its maritime networks), we will examine the islands' artefact database to identify imports.

Two problems arise in the identification of imports from the Scillonian database these are:

- That only a small number of artefacts have been subjected to detailed analysis.
- That the geology of Scilly is similar to the mainland, making difficult to distinguish between Scillonian and mainland sources of granite and granitic clay.

These points suggest caution in our interpretations as whilst it might be possible to identify imports, it is likely that contact between the archipelago and the mainland may be greater than suggested by the database. In order to identify imports we will consider five categories of material: stone, pottery, metalwork, amber, glass and faience.

8.2.1 Stone

The identification of imported stone both as artefacts and as raw materials depends upon the accurate identification of material foreign to the islands' geology. The solid geology of Scilly is dominated by granite with only small exposures of: elvan (quartz-porphry) and phyllitic country rock (Scourse 1986, 5). The dominance of granite upon the islands should make the identification of imported stone straightforward, however, this geology is complicated by the presence of glacial backwash gravels along the islands northern coastline. The granulometric analysis of these gravels has shown their composition to comprise: 5% flint, 26% greywackes/quartzites, 0.5% metamorphics and 64% local granitically derived material (Scourse 1986, 107, 113, fig. 47). The composition of these glacial gravels are important as in order to identify imports of non-granitic stone we must be confident that they do not occur naturally within these deposits.

In many instances, we cannot be confident that the source of potentially imported stone is not from these glacial gravels and detailed petrological studies of both deposits and artefacts are needed to clarify this point. As result of this problem, only stone that can be shown not occur on Scilly has been included in the following analysis; this material has been divided into three sub-groups: flint, fine-grained stone and pumice.

Flint

Most flint identified on Scilly is likely to be derived from beach pebbles but a small number are of better quality imported nodule flint (Fig. 8.1). Nodule flint does not occur on Scilly, the closest known source being from Beer in East Devon (Ratcliffe and Thorpe 1991). At present only seven pieces of nodule flint have been identified on the islands although it is likely that the analysis of museum collections by a lithics specialist may provide further examples. The small percentage of imported flint on Scilly is in stark contrast to Cornish sites, such as Carn Brea, where flint beach pebbles (which also occur along the Cornish coastline), were of far less importance than nodules obtained from outside of Cornwall (Saville 1981, 108). On Scilly, imported flint plays a minor role in island's struck flint repertoire. For example, from an assemblage of 2039 flints recovered from the digging of amenity trenches across the islands only four pieces of nodule flint were identified (Ratcliffe and Thorpe 1991).

Two imported flints identified on Scilly are: a Neolithic struck flint adze from Knackyboy Cairn and a Mesolithic Larnian blade from Content farm (Thomas 1985, 97, fig. 38). The remaining flints are not chronologically distinctive but came from a cliff section at Old Quay, St Martin's; a site that has consistently produced both Mesolithic and Neolithic artefacts. Tentatively this may be related to the way in which the islands were occupied. During the Mesolithic and Early Neolithic individuals and communities may only have visited the islands at significant times during the year, perhaps associated with the nesting seasons of birds or at key times during the migratory cycle of fish. These hunter-fishers may have been self-sufficient bringing with them flint tools from the main land. By the Early Bronze Age, the first period of identifiable occupation, the flint resources of Scilly were fully exploited for the production of tools and imported flint became less significant.

Fine-grained stone

Fine-stone artefacts that can identify as imports include: a Group I stone ball, from Nornour (Fig.8.2), a Neolithic polished greenstone axe from Gugh, a Late Neolithic/Early Bronze Age dolerite shaft-holed adze from English Island Carn (Fig.5.22) and a green stone pounder from Nornour. Although we can demonstrate that these artefacts were imported into the archipelago, only the stone ball from Nornour can be traced to a geological source in the Mount's Bay area of West Penwith (Clough and Cummins, 1988, 7, 146). Other fine-grained stones identified comprise largely artefacts made from tourmaline, slate, sandstone and lamprophyre all of which could have originated from sources in West Penwith. Of particular note is a cache of Late Neolithic/Early Bronze Age maceheads, shaft-holed adzes and a battle-axe found in a farmer's field at Normandy Farm (Figs. 8.3 and Fig.5.22). The majority of these artefacts were broken before being deposited although the precise context of their discovery is uncertain.

Semi-precious stones such as agate, chalcedony and cornelian have also been identified from prehistoric contexts on Scilly (Fig. 8.1). These stones are most commonly found in Scotland and along the eastern coast of England but have recently been identified in south-west Britain at Loe Bar, St Ives and Kynance Cove (Rodgers 1975; 69, 88). I am unaware of a source of agate or cornelian on Scilly. In the absence of the positive identification of a source for these stones on Scilly it can be assume that they were also brought into the archipelago during prehistory.

Pumice

Pumice has been found on Scilly within three archaeological contexts (Fig. 8.1). At East Porth, pumice was found sealed within a pit containing Hembury pottery. At Porth Hellick Down, a perforated piece of pumice was recovered from the chamber of an entrance grave (Ashbee 1974; Hencken 1933). Pumice is also recorded from House 1 at Nornour, although details of its precise context cannot be established (Clough and Cummins 1988, 146).

Abrasion on the flat surfaces of the pumice found on Scilly suggests their use as scourers, probably used to clean and prepare animal hides. The intentional deposition of pumice within pits and most notably within a burial chamber suggest that as well as having a utilitarian function this material might have held special significance. The careful perforation of the pumice found at Porth Hellick Down suggests the attachment of a cord and the likelihood that this artefact was used as a pendant or talisman wore around the neck (Fig. 8.4). Pumice may have held special significance to the islanders because of its rarity and because of its unique ability to float in water.

Pumice has a limited distribution within northern Europe, being most prevalent along the coastlines of northern Scotland and north-west Norway where it has been identified from both beach deposits and archaeological contexts (Branigan 1995; Piggott 1954a, 230). In common with the pumice found in Northern Scotland, that identified on Scilly is brown. Brown pumice in the Northern Atlantic has been sourced to the Katla volcanic system of southern Iceland (Newton and Dugmore in Branigan *et al* 1995, 145).

The question to be asked is how did this pumice arrive on Scilly? Two possible scenarios can be suggested:

- That the pumice was transported by ocean currents from its source and washed ashore on Scilly.
- That the pumice has been intentionally brought onto the islands through human contact.

Pumice can enter the sea either by falling directly into it during an eruption, or by being transported by rivers and lava flows. Because of the lightness of pumice, once it has entered the sea it will float and be transported by Atlantic Drift. Contrary to popular belief an object floating within the upper water column of the ocean will not travel in a random direction but will follow a specific trajectory. Oceanographers have estimated that such an object floating in the Northern Atlantic will be transported in a north easterly direction and will move on average one nautical mile per day (Banner and Collins 1980). At various times the object may be some distance from this general course and will be travelling at much faster or slower rates under the influence of tides, gales and seasonal circulation features, however, when averaged out over the course of a year this north easterly drift is prevalent.

Minor variations within this pattern of water movement have been recorded in the northern ranges of British waters, which account for the presence of pumice in northern Scotland (MAFF 1981, 2.16). The oceanographic data suggests that it is extremely unlikely that North Atlantic Drift could transport pumice from a source in southern Iceland as far south as the Isles of Scilly.

It seems likely that the pumice found on Scilly is derived from Scotland and brought to the islands via sea routes down the western seaboard of Britain. It is difficult to find an example of a pumice pendant similar to that found in the entrance grave on Porth Hellick Down. Only three examples could be identified, the first an axe-shaped pendant found in the passage grave of Unival, Uist, a second from the tomb of Taversoe Tuick on Rousay and a third from a cist burial at Kerlescan, Brittany (Le Cam 1999, 120; Scott 1948, 29-30; Piggott 1954a). The presence of pumice in a prehistoric Scottish passage grave is perhaps not surprising but the presence of pumice in a Breton burial monument is suggestive of either trade along the Northern Atlantic seaways or connections with the Mediterranean. Bonsor was of the opinion that the pumice on Scilly may have had a Mediterranean origin, pointing to the occurrence of pumice in passage graves in southern Spain (Hencken 1933). Based upon current data a Mediterranean source for the pumice on Scilly is unlikely, however, future chemical analysis of Scillonian pumice may clarify this matter.

The cumulative information demonstrates that stone was imported into the islands throughout prehistory. It is particularly interesting that many fine-stone artefacts such as axes, shaft-holed adzes and mace heads occur, dating to the late third and early second millennium BC, a period when the islands are traditionally considered isolated from outside contact. The occurrence of these artefacts suggests this not to be the case and that contact between the archipelago and the mainland was maintained throughout this period.

8.2.2 Metalwork

Metalwork is rare within prehistoric Scilly and appears to have played only a minor role within the day-to-day lives of prehistoric islanders (Fig.8.5). Copper is not found on Scilly and although a few insubstantial veins of tin are found, it is unlikely that these were ever exploited. Similarly, iron ore does not occur on the islands, and whilst it is feasible that iron could be extracted from iron deposits, which, accumulate naturally in the soil profile (as a result of podzolization), this is unlikely. Prehistoric metalwork must therefore have been imported onto the islands as finished artefacts or as raw materials. On balance, and in the absence of any evidence for metalworking sites on Scilly, the former of these two scenarios would seem most probable.

A socketed axe from St Mary's is of a Breton type common within Cornwall (Hencken 1932, 307) whilst the terminal from a bronze bracelet and hook from an earring from Knackyboy Cairn also has mainland parallels (Ashbee 1960,110, 1974, 241; Clarke 1970, 397, fig. 946d). Similarly, a gold bracelet from Par Beach with distinctive out-turned terminals would suggest its inclusion within the Covsea tradition of metalworking (O'Connor 1980, 212). Similar Covsea bracelets have been identified in Cornwall (Hencken 1932). Other artefacts such as pair of massive bronze torques from Peninnis Head have no known parallels in the British Isles (Ashbee 1974, 241 fig. 50). Ashbee suggests a Northern European origin for these armlets drawing attention to their similarity to Forssander's 'Northern series' of torques (Ashbee, I960, 114 Frossander 1936. Taf. XXXVII, 1)

The most remarkable assemblage of metalwork on Scilly comes from a Late Iron Age Porth Cressa cist burial at Hillside Farm. This burial contained a rich assemblage of metalwork comprising: La Tène II sword, scabbard and mounting ring, a bronze mirror, the bindings and bosses from a hide shaped wooden shield, a bronze spiral ring, a Nauheim variant brooch and an unidentified object made from tin (Fig.5.23). This burial fits well with a wider European tradition of warrior burials found within the British Isles and Atlantic Europe (Parfitt 1995; Stead 1991a, 1991b; Whimster 1981) and suggest that 'exotic' burial goods were being used on Scilly to construct social status and emphasis connected identity through sea borne contact with the outside world. The publication of this remarkable burial will contribute greatly to our understanding of the relationship between Scillonian and mainland and European prehistoric communities.

Whilst this metalwork on Scilly suggests wide contacts within Britain and continental Europe, whether artefacts were traded directly with the islands or acquired indirectly via the Cornish mainland cannot be determined.

8.2.3 Faience and glass

Faience beads were found within the Late Neolithic entrance grave of Knackyboy Cairn, whilst glass beads occur within Late Iron Age burials at Parson's Field (Fig.8.6). The star-shaped faience bead from Knackyboy Cairn (O'Neil 1952, Pl.16b) is of a distinctive form whose distribution appears concentrated to the copper salt rich regions of south-east Scotland and in particularly to the Culbin and Glenluce Sands areas of the Moray Firth (Burgess 2001; 280; Newton and Renfrew, I970, 203). A similar star-shaped faience bead has recently been discovered in a cairn on Stannon Down, Cornwall (Nowakowski 1999), demonstrating that if we are correct in interpreting the production site of these artefacts, we may envisage exchange systems along the western Atlantic seaboard. In contrast, the glass beads from Parson's Field form a separate group that at present can be presumed to be of local manufacture. Whether this means manufacture on Scilly or at a mainland centre, where perhaps metalworking was undertaken, is not clear.

8.2.4 Amber

Two amber disk beads were found within a Late Iron Age Porth Cressa cist in Lawrence Bay (Lewis 1948, Pl. Xb). Amber in prehistoric Britain may be derived from three sources

- Baltic amber imported into Britain (as raw material or as a finished products).
- Baltic amber that occurs naturally on the eastern shores of England and Scotland (where ocean currents have deposited it).
- Amber derived from one of the few fossil resins native to the British Isles.
  (Beck and Shennan 1991, 15):

Amber does not occur on Scilly, neither as indigenous fossil resins or a beach deposits washed ashore by ocean currents. Whilst the source of this amber is not known (this could be clarified through infrared spectroscopy) its occurrence on Scilly in a Later Iron Age burial suggests that it was imported during later half of the first millennium BC.

8.2.5 Pottery

Imported pottery can be identified through the identification of non-local clays and inclusions. In reality, only a fraction of the prehistoric pottery from the islands has been studied in any detail and of this, few sherds have been subjected to petrological analysis. From the studies that have been conducted, only a small percentage can be shown to be imports, with the majority made from local granitic clays (Parker Pearson 1990, 1995; Williams 1978a).

The presence of Earlier Neolithic Hembury pottery on Scilly may indicate a postulated earlier importation of pottery into the archipelago. On Scilly this pottery has been found in six locations: in the fill of a stone-lined pit at East Porth, at the entrance graves at Bant's Cairn and North Hill Samson, in a midden on Annet and in cliff-sections at Old Quay and Bonfire Carn (Fig. 8.7 see also Thomas 1985, 102, fig.42).

Hembury pottery in south-west Britain is made exclusively from the gabbroic clays; a point dramatically illustrated at Carn Brea where all 40,000 sherds of Hembury pottery recovered were of gabbroic origin (Mercer 1981, 1986b; Peacock 1969b; 1988). This preference for the use of gabbroic clays in the production of Earlier Neolithic pottery in Cornwall is further supported from other sites within the south-west such as, Gwithian, Hembury and Maiden Castle (Megaw; 1976; Mercer 1986a; Peacock 1969; 1988; Sharples 1991). Whilst no petrological analysis has been carried out upon Hembury pottery on Scilly, this pottery is characterised by the inclusion of infrequent, but large, pieces of granite within a fine almost soapy matrix. Visual inspection of these sherds in the course of my research suggests that non-local inclusions, most likely green stone and/or serpentine, might be present within this pottery. Petrological analysis is required to confirm the presence of these non-local inclusions. This may suggest that Hembury pottery on Scilly, like that found at Carn Brea, was made from an admixture of granite and gabbroic clay (Mercer 1981). The confirmation of non-local inclusions within this pottery would suggest that Earlier Neolith Hembury Ware was transported by sea from the mainland during the forth millennium BC.

Imported pottery although rare, was brought onto the islands over a long period of prehistory, from the Later Neolithic until the end of the Iron Age. Imports include, vessels made from gabbroic clays from the Lizard peninsular and pottery containing greenstone inclusions from West Penwith (Fig.8.7). At Nornour a number of unusual miniature pots made from gabbroic clay were found within the abandonment layers of a large hearth in house one (Fig. 8.7 see also. Fig.6.15 and Fig.6.19). No comparable pots are found elsewhere on the islands or on the mainland. These pots through their shape and decoration appear to imitate miniature versions of Middle Bronze Age Trevisker pottery. Trevisker pottery in the south-west is made almost exclusively from gabbroic clay. The purpose of these pots remains elusive but the analysis of residues inside them may help in their future interpretation (submitted for analysis by the Isles of Scilly Museum in September 2003). Other non-gabbroic imported pottery includes an earlier Iron Age carinated bowl from Nornour and a collared urn from Pendrathen. The collared urn, removed from the cliff-face at Pendrathen (wrongly attributed to Normandy Farm) has proved on analysis to comprise of clay containing greenstone inclusions (Samuel 1974; Parker Pearson 1990, 1995), whilst a carinated bowl from Nornour is made from a non-local form of granitic clay (Williams 1978a)

From the Late Bronze Age onwards pottery forms common to the mainland, (such as, Later Bronze Age carinated bowls, Later Iron Age South-Western Decorated ware and Cordoned Ware) increasing occur on the islands. These vessels are sometimes made from clays not found on Scilly but more usually occur in local granitic fabrics. It is possible that this pottery has been produced from a mainland source of granitic clay and imported onto Scilly. Alternatively, this pottery may represent Scillonian adaptations of mainland pottery styles. Whilst the origin of this pottery is open to question, it is clear that the presence of recognisable mainland pottery styles on the islands demonstrates contact between Scillonian and mainland communities during this period.

8.3 The nature of contact

The identification of imports from the artefact database of Scilly demonstrates that the islands were in contact with a prehistoric world beyond the archipelago throughout prehistory. This evidence, although demonstrative, is limited to objects that have survived in the archaeological record and in particular to a small number of artefacts that have undergone detailed analysis. Whilst contact between Scilly and the mainland can be demonstrated through the presence of imported items, Scillonian material culture has not been identified outside of the archipelago. The absence of Scillonian material culture on the mainland may be due to exchanges in commodities, such as oil or skins that have left no trace in the archaeological record.

Prehistoric Scillonians must have had an abundance of oil available to them; seal, whale, dolphin and many of the seabirds and fish recorded from bone assemblages would have providing a constant supply (Turk 1971, 1984c). Enormous Bronze Age and Iron Age stone basins and troughs (Figs. 6.15, 6.16 and 6.18) suggest large scale processing, whilst the analysis of residues from prehistoric pottery has identified their contents as marine oils (Evans 1983). It seems surprising that such a small island community found it necessary to produce so much oil and it may be suggested that this oil may have been widely traded.

Evidence for overseas contact demonstrates both the practicalities of travel and the importance of social contacts, but this data does not allow us to establish whether artefacts, whose origins might fall outside of the British Isles, were traded directly with Scilly or came to the islands via down-the-line trade with mainland Cornwall. Although the Scillonian database cannot demonstrate the network of contacts to which prehistoric islanders had access, they do highlight the paucity of such networks. For example the identification of St Michael's Mount as an important prehistoric tin port during prehistory would suggest that by the Iron Age substantial ocean going vessels were passing within Scillonian waters (Herring 1998, 2001). The position of the islands, at the entrances to the English Channel, Bristol Channel and Irish Sea, would have been known to prehistoric seafarers and boats navigating the Lands End peninsular would have used the islands as a wayfaring point or even harbourage. It is therefore feasible that the islands might have had contact with prehistoric communities from along the Western seaboard of Europe.

Although we can demonstrate, that Scilly was not physically isolated from cultural contact we should not assume that the islands were fully integrated with mainland communities, as the degree of isolation would have varied considerably through time. The available data on imports does not allow us to explore fluctuations in detail but does demonstrate a broad pattern of contact beyond the archipelago. During the Mesolithic and Early Neolithic the islands' material culture is identical to that found of mainland Cornwall (the petrological analysis of Hembury pottery from Scilly may confirm the suspicion that this pottery was made on the mainland). In contrast, during the Later Neolithic and Early Bronze Age distinctive Scillonian styles of monuments and material culture emerge with no mainland equivalents. By the end of the second millennium BC material culture and monuments occur that whilst remaining distinctively Scillonian, are clearly influenced by mainland forms (such Porth Cressa cists and south-western decorated and cordoned ware pottery).

8.4 The construction of Scillonian identity

Earlier accounts of Scilly suggest that the unique material culture of the islands during the Late Neolithic and Early Bronze Age advocate a period of island isolation (Thomas 1985); but as demonstrated above this interpretation cannot be sustained, as imports, such as stone axes, pottery, metalwork and faience beads occur through this period. Rather than looking for environmental explanations for Scillonian cultural difference, we need to question the implicit assumption that cultural contact leads automatically to similar forms of material culture.

It has been argued that the isolated nature of an island constructs unique island identities (Evans 1977). Contrary to this interpretation Broodbank (2000) and Robb (2001) argue that islands do not necessarily fashion identity but rather islanders create islands. This argument escapes from the development in isolation model by emphasising that cultural difference is not environmentally determined but the product of active social choices. Therefore, it can be argued that prehistoric Scillonians, through their material culture, emphasised local identity through constructed difference. Insularity is not an inevitable external condition of Scilly but a potential symbol within an islands' cultural geography.

In other words whilst fluctuations in the uniqueness of Scillonian material culture may in part relate to the degree of contact with mainland communities, the degree to which prehistoric Scillonians took up mainland forms of material culture was not solely determined by such contact. In this light, we might reverse the argument that isolation resulted in cultural difference by postulating that increasing inter-regional contact combined with the strengthening of local identities, created Scillonian identity. The prehistoric character of Scilly thus arose from the recombination and elaboration of cultural elements (e.g. burial monuments) common too a much broader region. Thus, island identity was the product of a reworking of a regional symbolic heritage into a local, cosmologically grounded identity.

8.5 Final note

Whilst the nature of contact between Scillonians and the wider prehistoric world remains unclear evidence for the movement of people and objects questions the extent to which the islands were isolated and calls into question the 'develop in isolation model'. Further research is required if we are to begin to understand the nature and extent of contacts that prehistoric Scillonians maintained. Of particular importance, will be the detailed analysis of the islands' artefact database in order to isolate further imports and to establish the origins of such objects. Through the identification of further imports and the networks of contact available to the prehistoric islanders it might be possible to question the changing patterns of isolation and integration experienced throughout Scillonian prehistory.

9: CONCLUSION

In this chapter I shall provide an overview of the thesis and assess what insights this research provides into how and why changes within the archaeological record relate to changing prehistoric perceptions of the island landscape of the Scillies.

9.1 A summary and critique of the framework of Scillonian prehistory

Chapters two, three, four and five created a framework for Scillonian prehistory that allowed the archaeological database of the archipelago to be analysed and interpreted. In this section I will provide an overview of this framework and suggest possible avenues for its future development.

Chapter 2 demonstrated that whilst archaeological research had taken place within the archipelago, this work was sporadic and uncoordinated. I argued that in order for Scillonian prehistory to be situated within contemporary archaeological discourse, the archaeological database of the archipelago first required reconsideration and evaluation. I have incorporated much new and previously unpublished archival data within this thesis. The further reassessment and publication of this material is of great importance for future research on the islands.

In Chapter 3 concepts and methodologies appropriate to the study of an island landscape were reviewed. Here I argued that previous studies of Scilly, and island studies as a whole, have failed to consider the importance of the sea in the constitution of the prehistoric world, as experienced by islanders. The crucial point here was that an island landscape comprises of both land and sea and that the boundaries between these mediums are not necessarily environmentally determined, but may be the product of social construction. In other words, prehistoric islanders lived through both the land and the sea and therefore our analysis of the significance of the island landscape must consider both as a single unit of analysis. This has an important implication for research within the archipelago in that fieldwork needs to be carried out both on land and by boat within the sea. The concept of an island landscape releases us from a landlocked perception of Scilly, allowing us to reconsider the archaeological record of the archipelago in new and exciting ways.

Through the reconsideration of past archaeological research, two important themes were highlighted and it was quickly recognised that in order to facilitate the analysis and interpretation of the archaeological record, these need be addressed. These themes were:

- The need to reconsider the environmental background of the islands (specifically the effects of sea-level change)
- The need to address the absence of a chronological framework for Scillonian prehistory.

9.1.1 An environmental background to Scillonian prehistory

Chapter 4 provided a reconsideration of available archaeological and environmental data, placing it for the first time within a modern archaeological framework. I demonstrated that the rate and effect of sea-level upon the archipelago was not as dramatic as previously assumed and that it was possible to model these effects in relation to the islands ancient configuration. Through a consideration of intertidal deposits and coastal morphology I demonstrated that it was possible to recreate the character and configuration of the ancient coastline. Using palaeo-environmental data such as ancient pollen, plant macro-fossils and animal bones, the character of the ancient island environment could be explored. This analysis showed that particular environmental zones within the island landscape such as heath, farmland, woodland and intertidal sand flats could be recognised as well as coastal and off shore waters. Through the isolation of these environmental zones, it was possible to consider, not only the basis and seasonality of Scillonian subsistence practices, but the places visited and journeys made by prehistoric islanders.

Scope for future analysis of the ancient Scillonian environment

In order to develop this framework, further research is required: in particular, it is essential that further intertidal and submerged deposits are identified, sampled and analysed and auger surveys carried out within the intertidal and marine environment to locate organic deposits. Intertidal deposits have been identified (but not sampled) within Bathinghouse Porth and Pentle Bay (Tresco), East Porth (Tean), Porth Hellick (St Mary's) Town Beach (Bryher), Porth Coose (St Agnes), Old Town Bay (St Mary's) and Samson Flats (CAU 1997; Ratcliffe and Stralker 1996). Of particular interest are buried peat deposits that may survive along the outward Atlantic shores of the archipelago, as these would provide valuable data on the effect of sea-level change upon the formation of embayed environments.

The extent of present day exposed intertidal deposits should be explored in order to determine their extent altitude and date. This could be carried out by the use of auguring and other prospecting techniques, along transepts across beaches where buried peat deposits have been recorded to obtain profiles of buried deposits and determine both their inland and marine extent. A combination of prospecting techniques might also be used within the marine environment in order to search for submerged deposits. Auguring from a boat to locate samples on the seabed could be used to assess the long-term history of the Scillonian coastline and in particular fluctuations between terrestrial and marine environments. A sonar sub-bottom profiler attached to a boat to provide a section through deposits below the present surface of the seabed could supplement this work. In the first instance this survey should be carried out between the present islands, such as between Par Beach, St Martin's and Bar Point, St Mary's.

Where organic deposits are encountered, samples should be taken for radiocarbon dating and environmental assessment. Detailed analysis of deposits should include: geo-chemical, sedimentological, and biostratigraphic techniques in order to explore the processes of their deposition and accumulation. Through the analysis of intertidal and marine deposits it might be possible to establish sea-level index points that allow for a more detailed consideration of the archipelago's ancient coastal morphology and configuration.

9.1.2 Establishing a chronological framework

The lack of a chronological framework for Scillonian prehistory has been a major stumbling block to research since archaeological interest began in the islands. Chapter five provided the first chronological sequence for Scillonian prehistory created through: the assessment of available radiocarbon dates, the reconsideration of past excavations, and through the isolation of chronologically distinctive artefacts. Through this analysis I have suggested a chronological framework though which it is possible to consider the archaeological record of Scilly.

Refining the chronological framework of Scilly

Whilst this sequence has provided an adequate framework for an initial analysis of the archaeological record of the islands, there is scope for greater chronological resolution. Gaps within this framework could be addressed through the selective excavation of archaeological sites and through the acquisition of samples (from secure archaeological contexts), for radiocarbon dating. Priority should be given to the excavation of both an entrance grave and a cairn (from within on of the islands' cairnfields) as these might provide valuable information into the complex chronology of these monuments.

The early prehistory of Scilly is also poorly understood and it remains unclear as to whether the islands were permanently or seasonally occupied. Future research should focus upon this period; two sites that might produce valuable data for this period include Old Quay, St Martin's, which has produced evidence for Mesolithic and Early Neolithic activity, and a substantial midden on Annet, that has produced Early Neolithic pottery. The excavation of these sites may reveal important information about the early economy and colonization of the archipelago. As sites are under threat of destruction by the sea, the high potential of these sites and their vulnerability combine to form a powerful argument for future work.

9.2 Social and spatial relations during Scillonian prehistory

This section assesses the data already presented for evidence of changes in social and spatial relations during Scillonian prehistory. I will explore changes that took place between the earlier (Mesolithic-Early Bronze Age) and later (Middle Bronze Age-Late Iron Age) prehistory of the archipelago. Of primary concern is the contrast apparent in the data between an earlier prehistoric island landscape dominated by monuments, and a later prehistoric island landscape dominated by settlement.

9.2.1 Earlier Scillonian prehistory

Chapters six and seven evidence for prehistoric settlement and monuments on Scilly was explored. It was shown that whilst stray finds of early artefacts, such as microliths and Hembury pottery, demonstrate a Mesolithic and Earlier Neolithic presence on the islands, little evidence for actual sites could be identified (Berridge and Roberts 1986, Ratcliffe 1990). Sites that have been identified include pits containing artefacts at East Porth, Samson and Old Quay, St Martin's and a midden on Annet (Cornwall Site and Monument Record PRN. 7071.01; Ratcliffe 1994). Whilst I suggested that some of the Scillonian entrance graves might date to the Earlier Neolithic, current data cannot confirm this and I will assume in the following discussion that these monuments belong predominately to the Later Neolithic.

Whilst the possibility that early settlement on Scilly might be located below later houses and comprises wooden structures, evidence at present is sparse. Similarly, evidence for Mesolithic and Neolithic settlement from mainland Cornwall is insubstantial and frequently ambiguous (Mercer 1986; Megaw 1976; Thomas 1958), but here substantial megalithic tombs and hilltop enclosures are found dating to the Earlier Neolithic (Barnatt 1982; Mercer 1981, 1986a, 1986b; Tilley and Bennett 2001). The absence of identifiable evidence for settlement for this period on Scilly might suggest that the archipelago was not permanently occupied and only visited seasonally by mainland hunter-fisher communities. Alternatively, the apparent absence of settlement on Scilly (and the mainland) relating to this period may result from the imposition of a modern conception of what constitutes the domestic realm and the failure of archaeologists to recognise a totally different way in which the islands were occupied (Brück 1996; Darvill and Thomas 1996).

In contrast, the Later Neolithic and Early Bronze Age of Scilly saw major interventions within the island landscape. The archaeological record, for this period is marked by burial and ceremonial monuments (such as entrance graves, cairns and standing stones) which the continued absence of recognisable settlement.

Possible evidence for Later Neolithic and Early Bronze Age settlement has been found below later stone built houses, evidenced by early cut features such as stone lined pits, postholes and gullies (Butcher 1978; Neal 1983; O'Neal nd.g). A similar scenario was recorded at Gwithian where evidence for Late Neolithic and Early Bronze Age settlement was also found below later houses (Gibson 1982; Megaw 1976; Thomas 1958).

The absence of permanent houses on the islands suggests a degree of residential mobility. I do not mean by this that the islands were only occupied seasonally, but that Late Neolithic and Early Bronze Age islanders did not fix their settlements within specific locales. Settlement of this period appears more fluid and transient, perhaps moving to different locations within the archipelago dependant upon season and availability of resources. This would suggest a degree of residential mobility with relatively little rigid differentiation of settlement space. In this respect, a distinct class of settlement site never existed during the Later Neolithic and Early Bronze Ages and those activities defined as domestic took place in different locales within the islands' landscape, as yet unrecognised.

The abundance of monuments during this period indeed suggests that during the Later Neolithic and Early Bronze Age the archipelago contained a resident population. The presence of imports (as shown in Chapter 8) demonstrates that regular contact with mainland communities was maintained throughout the period although movements of people and objects may have varied considerably through time. In contrast to settlement, monuments of this period are substantial permanent structures that emphasis and fix specific island locales. I have argued in Chapter 7 that these are linked to movement within the sea and in particular to fishing and hunting within the islands coastal waters.

The archaeological data from this period suggests that farming played a minor role in the subsistence of islanders; fishing, the collection of shellfish and the hunting of sea mammals on the other hand were central to day-to-day life (Figs. 4.17-4.25). These activities demand group participation, coordination and cooperation. For example fishing, (particularly within offshore waters) cannot be carried out without cooperation. This inherently dangerous practice requires mutual trust and collaboration if carried out successfully and safely. The potential loss of a boat's crew would have had disastrous consequences for the island community with the potential of decimating the population. It is temping to suggest that, as in recent times, crews might comprise of members of different family groups, thereby, avoiding the risk of wiping out an entire island family if a boat was lost at sea (Gill 1975; Jenkins 1982). Seafaring therefore, bound island families together creating mutual trust, interdependence, and neighbourliness that in turn would have been important in the production of a common island identity. Whilst fishing is an inherently socialising practice we can also assume that the division of catches might have been divided upon a communal basis, potentially all islanders or those who had a stake in a boat (either through joint ownership or through a kinship tie to a crew member) had claim to a proportion of a day's catch (Cordell 1989).

The multiple burials placed within entrance graves during the Late Neolithic suggest an undifferentiated society and appears to stress the unity and integrity of the whole kin group rather than individuals. Through communal burial, individual identity is sacrificed for the sake of a common ancestral identity. In other words, the dead association with their individual 'living' identity and are transformed to a generalised ancestral realm that exists over and beyond that of the human life cycle.

During the Early Bronze Age, burials were still occasionally placed within entrance graves, increasingly throughout the period single burials were placed beneath cairns in large cairnfields. Single burials beneath cairns, in contrast to earlier communal burial practices, relate to individuals with each burial placed in relation to others within cairnfields. In other words, the precise genealogical position of the deceased individual within a kinship group was defined through the context of the mortuary rite. Through the spatial arrangements within cairnfields genealogical lines were drawn so that it was possible for an Early Bronze Age person to identify the individual graves of descendants. This marks a dramatic shift from earlier burial practices in that, rather than burial emphasising social inclusion and group identity, burials began to highlight individual identity and the importance of kinship relations. Thus, although the development of large cairnfields during the Early Bronze Age underlies the continued importance of extensive kinship groups, they comprised a number of individual cairns which formed the focus of burial rites of smaller and more closely defined lineage sub-groups. This contrast in the burial data, from communal to individual, suggests the beginnings of social fragmentation.

This data suggests that Late Neolithic and Early Bronze Age islanders were composed of fluid groups with negotiable identities where identity was not invested in the permanent attachment to a specific locale but constituted through membership of extended kinship groups.

9.2.2 Later Scillonian prehistory

From the Middle Bronze Age onwards a dramatic change occurs with the archaeological record of the islands: the monuments that typified earlier periods cease to be constructed and were replaced by evidence for settlement. This new focus upon settlement is in common with the prehistory of mainland Britain where a similar transition is also recognised as taking place between the Early and Middle Bronze Ages (Barrett 1994; Barrett *et.al* 1991; Brück 1996).

This period on Scilly is different from its predecessors in that architecture was used for the first time as a means of defining and structuring settlement space. The residential mobility of early periods disappeared and people seem to have resided in one place for most, if not, all of the annual cycle. We may argue that during this period the household, which perhaps comprised a nuclear or small extended family, became the primary social unit which the individual owed allegiance: the co-resident group of Scilly became a more static entity in space and time. This is not to argue that the ordering of settlement space continued unchanged from the second millennium BC until the end of the first century BC, as considerable variability occurs between both sites and through time, but that in contrast to earlier periods, settlement architecture acted as a means of formalising and objectifying a set of more permanent spatial and social relationships.

During the Later Neolithic and Early Bronze Age I argued that the daily and seasonal rhythms of life were carried out within a multitude of locales in the island landscape. In contrast from the Middle Bronze Age onwards, these activities were carried out principally in relation to a single dominant locale (settlement) that in spatial terms represented a particular focus for daily activities. Through the construction of settlements people were socialised with a new sense of place, belonging and history, where individual and group identity was now constituted through long-term attachment to one particular locale.

Through the construction of houses the identity, integrity and independence of each household group was highlighted with distinctions drawn between individual houses and the wider society. The process of fragmentation seen in Scillonian later prehistoric settlements had its origin in certain Early Bronze Age social practices, such as individual burial. These practices set the precedent, forming a source of practical knowledge and providing a range of possible course for future action (Brück 1996).

The construction of houses suggests a particular structuring of space. This definition of space was further articulated through the internal segmentation within houses, for example, through the construction of partition walls. The data used in Chapter 6, to analyse the internal spatial arrangement of houses, was necessarily based upon a limited sample of excavated houses. Whilst this does not allow us to analyse the internal spatial organisation of houses in detail, it does suggest that through the segmentation of house interiors the interpretation of space was more closely defined, inscribed and anchored.

The substantial architecture of prehistoric houses appears to proclaim long-term attachment to place yet as I have agued in Chapter 6, many houses were only occupied for a single generation. Thus the lifecycle of individual houses was probably intimately related (in both practical and metaphorical terms) to the lifecycle of its inhabitant. Whilst houses were only occupied for relatively short periods of time, settlement locales were reused and modified for considerable periods of prehistory, suggesting cross-generational stability as the norm.

At the end of the lifecycles of houses complex abandonment processes were enacted resulting in the burial of houses beneath artefact-laden deposits of soil, rubble and midden. At a number of sites where abandonment data allows further analysis, structured deposits of artefacts (offerings perhaps) were placed within specific features (e.g. hearths) as part of the abandonment process. Artefacts such as pottery, quern stones, flint, animal bones and fishing weights mirror the activities carried out by the occupants of the house, activities that ensured the maintenance and reproduction of the household.

By living amidst the material evidence of earlier occupation, such as the remains of abandoned houses and material culture, the biographies of settlement locales were invested with meaning, with a sense of continuity and cohesion fostered between the living and ancestral occupants. Through the continued occupation of locales of settlement, genealogical lines of descent were drawn out to emphasis the centrality of the household unit within later Scillonian prehistory.

During the Later Neolithic and Early Bronze Age, social relations were materially manifested and played out though communal burial within entrance graves and the placement of individual burials beneath cairns. During Scillonian later prehistory emphasis shifts from monuments to settlements, now social and kinship relations are played out through the continued occupation of a single locale (settlement). It is interesting to note that from the Middle Bronze Age to the end of the Earlier Iron Age archaeological evidence for burial practices disappears from the archaeological record. It must be presumed that during this period the disposal of the dead was carried out in a way that rendered them archaeologically invisible, such as through their deposition within the sea. I would interpret this change in burial practice as representing a profound change in social and spatial relations. In the Later Neolithic and Early Bronze Age social and kinship relations are evidenced through burial monuments, but from the Middle Bronze onward these relations are manifested through settlement. In other words, the social significance of burial monuments is transferred to the realm of the domestic: houses metaphorically become monuments. The significance placed upon the remains of ancestors and their places of internment is replaced by a new emphasis upon the places where ancestors once inhabited. This relationship between ancestors and houses is further emphasised during the Later Iron Age when burial monuments appear once more within the archaeological record. Burials now are placed in close proximity to settlement locales or even, in the case of Par Beach, inside abandoned houses (Ashbee 1974; O'Neil nd.c).

Profound social and spatial changes can be detected within the archaeological record of Scilly, primarily manifest in the transformation of an island landscape dominated by monuments to one of settlement. Underlying this transformation is the fragmentation of prehistoric Scillonian society: from flexible and expansive kinship systems that stressed the unity and integrity of the whole kinship group to one that stressed the relative independence of the individual household over the community.

These changes within the archaeological record have traditionally been explained on the mainland as being the result of changes in subsistence practices and in particular the intensification of agriculture. On Scilly economic changes are manifest in the emergence of field systems (likely to date from the Middle Bronze Age). Whilst field systems suggest new and novel subsistence practices, archaeological and environmental data does not demonstrate a new emphasis upon agricultural production. Fishing and hunting, evidenced in animal bones recovered from middens, appears to have continued as the primary means of sustenance, supplemented by the growing of crops and the keeping of domestic livestock. Thus, later prehistoric islanders were primarily hunter-fishers who farmed, a position that continued into historical times (Gill 1975). New subsistence strategies, although important, did not result in a new form of society but were in fact the consequence of wider social changes in Scillonian society (such as social fragmentation).

9.3 The social construction of the island landscape

I have argued throughout this thesis for the importance of considering the Isles of Scilly first and foremost as an island landscape. The sea played a major role, both economically and socially, in the lives of prehistoric Scillonians. From the earliest prehistory of the archaepelago, Scillonians journeyed out into the sea to fish, hunt and maintain contact with mainland communities. Chapter four demonstrated, through the identification of different species of fish from the archaeological record, that prehistoric islanders were regularly visiting different locales within the sea such as offshore and inshore waters. This data also confirms through the identification of migratory species of fish that islanders were fishing throughout the year (Fig,4.23). Similarly, Chapter 8 demonstrated through the isolation of imported artefacts and objects that contact with the mainland was maintained throughout prehistory.

It was through this daily engagement between islanders and the sea that the cultural island landscapes of Scilly were constructed. In this environment boats and people would have been intimately connected and knowledge of the sea (such as where to fish, or currents and places to avoid) would have become defining characteristics of Scillonian identity. Through movement on the sea, both within and beyond the coastal waters of the archipelago, prehistoric islanders would have developed an intimate knowledge of both sea and land. Through the correct identification and interpretation of landscape features, such as coastal tors, the landscape would have informed and structured movement. In Chapter 7 I argued that these wayfaring techniques are fundamental to seafaring, and that knowledge of them would have shaped the experience and perception of the island landscape.

The mundane environment imposed patterns of movement, such as regular journeys to and from landing places and along prescribed routes through the sea. Underneath these apparent mundane journeys can be found the structure of prehistoric Scillonian cosmology, which provides a system of categories by which certain activities such as fishing, appear appropriate to specific places. Through the daily activities of prehistoric Scillonians on both land and sea the mythical and ancestral relationship between the natural and cultural world was brought sharply into focus, where cosmologies were repeatedly acted out in every departure from and return to the archipelago. The islanders would not simply obey these rules of everyday life but would have acquired 'habits' and 'views' through a complex process of experience and incremental adjustment (Bourdieu 1977; Goffman 1990).

During the Mesolithic and Early Neolithic connections between living populations and the past were embodied into the island landscape through human activity and through the creation of named and significant places, linked together by paths of movement. During these periods little impact was made upon the physical island landscape, the significance of which was understood through meaning attached to the experience of natural elements of the islands, primarily through movement upon both land and sea.

On the sea, the land is used to inform the seafarer about the sea through wayfaring and the recognition of prominent landmarks. Chapter seven argued that the most significant of these landmarks on the islands are the coastal tors found along the Atlantic shoreline. For example, in a crossing from the mainland to the islands these tors are the first recognisable signs of landfall and would have literally guided boats into the safe harbour of the archipelago. Through their correct recognition generations of seafarers learnt about the island landscape and how to safely move through the seascape. Stories and myths would have surrounded them perhaps linked to their creation, to islanders lost to the sea, to sea creatures encountered, and to successful fishing trips. But these tors might also have been ambiguous places where a fine line existed between success at sea (such as safe return to land) and failure at sea (the loss of a boat and its crew). This ambiguous quality might be highlighted by their rules of interpretation, if they were interpreted correctly they could guide a boat safely to harbour, but if wrongly interpreted they might guide boats into the dangerous currents, submerged reefs and rock pinnacle that characterise the archipelago's Atlantic coastline.

During the Later Neolithic/Early Bronze Age substantial monuments were constructed. In Chapter 8 I argued that these monuments were intimately linked to the island landscape, firstly through their coastal distribution, and secondly through their proximity to prominent coastal tors. These cultural constructions were used to create a new sense of place by emphasising ancestral relationships between significant locales along the coastline with the physical remains of the dead. The settings of these monuments served to relate the bones of previous generations to a topography and symbolic geography of places and paths that had already been constituted in the Mesolithic and Early Neolithic. Thus, an already encultured island landscape became refashioned, its meanings now controlled by the construction and articulation of monuments. Through the imposition of monuments, the significance of the island landscape was emphasised and understood. The settings of the monuments served to make permanent, anchor, fix and visually draw out connections between people, the land and the sea. These changes occurred in third millennium BC, associated with the first permanent settlement of the islands, and served to fix, in material form, a specific island identity.

I have argued that during the Middle Bronze Age major changes occurred within the archaeological record of the islands. The monuments that dominated the Late Neolithic and Early Bronze Age were no longer constructed and were replaced by a new emphasis upon the construction of settlements. Whilst monuments were not constructed during this period their importance as significant island locales continued. This is demonstrated by their reuse during the Middle Bronze Age when burials were occasionally placed within the chambers of entrance graves or placed as satellite burials within their cairns (O'Neil 1952). Around 1200 cal BC the use of these monuments for the internment of burials stopped and many of their chambers were sealed.

Whilst these monuments no longer served as depositories for the dead they remained as substantial features within the island landscape and would have continued to be significant to prehistoric islanders. Part of the continued significance of older prehistoric monuments was the spatial relationship between them and the sea. As I have argued in chapter seven, monuments such as entrance graves and standing stones were located within significant locales along the ancient coastline that enabled islanders to orientate themselves and structure movement within the archipelago. Whilst the monuments constructed within these locales were no longer used for the internment of the dead, their significance and use as wayfaring points continued throughout prehistory (and in many instances up to the present day [Brandon 1999]). In this respect whilst these sites are primarily classified as Late Neolithic/Early Bronze Age burial monuments their significance and use continued throughout the prehistory of Scilly.

The founding of archaeologically recognisable settlement during the Middle Bronze Age constituted a further way through which the island landscape was experienced. The location of settlement along the inner coastline of the archipelago, and most significantly within locales where boats could be launched and stowed, emphasised further the importance of the sea to these island communities. These locales once again highlight the importance of the sea and the duality of the concepts of landscape and seascape.

The themes outlined above, such as movement on the sea and the intimate relationship between land and sea, might at first appear specific to the archipelago or island landscapes but similar correlations can be observed from elsewhere along the Atlantic seaboard of

Britain (Barnatt 1986; Borlase 1879; Cummings and Whittle 2003; Herring 1994; Megaw 1976). The strong correlation observed between the archaeological record of Scilly and the sea is perhaps drawn out and emphasized through the fact that Scilly is first and foremost an island. These themes may also be appropriate for the study of prehistoric mainland coastal communities along the Atlantic seaboard of Britain, where similar relationships have also been noted between prehistoric monuments and settlement (Cummings 2002; Cummings and Whittle 2003).

The archaeological record of Scilly demonstrates the equal importance of both the land and sea. Evidence for domesticates can be detected from the beginning of the second millennium BC. Fishing was of equal importance throughout this period and the presence of Earlier Neolithic Hembury pottery, associated with a substantial midden on Annet, suggests that this was practiced on Scilly from at least the fourth millennium BC.

By focussing upon the relationship between the archaeological record of Scilly and its relationship to the sea I have perhaps played down the significance of inter-relationships between sites on the land. In part this has been intentional as I have wished to stress the importance of the sea as a meaningful and essential part of the island landscape. The sea has been under-theorised within archaeology and in particular, has not been considered an appropriate topic of study within Scillonian archaeology. I hope that by drawing out the archaeological record of the islands beyond the boundaries of its coastline we might start to reconsider the importance of the sea, not only as a metaphor or symbolic backdrop for life on the land, but as an active element within the daily lives of prehistoric islanders.

9.4 Closing note

This thesis has provided a detailing and interpretation of the changes visible in the archaeological record. By exploring new ways of interpreting the rich archaeological record of Scilly, I hope that my research may generate renewed interest in these remarkable islands. In his classic work on Scilly, William Borlase remarked of the unique character and importance of the islands' archaeology, today his words are as true as when he wrote them almost two and a half centuries ago:

> "Though these islands are so near us, they are little known, and much less valued than in all reason they ought to be" (1756: 140).

APPENDIX A: RADIOCARBON AND MAGNETIC DATES

The radiocarbon dates quoted below are given as calibrated dates, expressed at both one (68%) and two sigma (95%) levels of confidence as recommended by Mook (1986). The recalibration of radiocarbon determinations has been achieved using the computer programme CALIB v4.1 devised by Struiver and Reimer (1986a, 1986b, 1993), using data published by Struiver *et al* (1998). All re-calibrations were carried out February 2001.

Radiocarbon dates derived from archaeological contexts

Site: Bar Point, St Mary's
Description of site: Field system
Context: Ditch running alongside field boundary
Sample: Charcoal
Reference: Evans 1985
HAR-3483 2140 ± 70BP
1 sigma: 352- 54 cal BC
2 sigma: 385 cal BC-17 cal AD

Site: Bonfire Carn, Bryher
Description of site: House exposed in cliff-face
Context: Layer 5
Sample: Charcoal (gorse/broom).
Reference: Ratcliffe and Stralker 1996, 80
OxA-5289 2785 ± 60BP.
1 sigma: 1001-835 cal BC
2 sigma: 1111-812 cal BC

Site: Bonfire Carn, Bryher
Description of site: House exposed in cliff-face
Context: Layer 5
Sample: Charcoal (*Ericaceae*)
Reference: Ratcliffe and Stralker 1996, 80
OxA-5290 2755 ± 65BP
1 sigma: 973-828cal BC
2 sigma: 1047-801 cal BC

Site: East Porth, Samson
Description of site: Ancient land surface
Context: Burnt land surface
Sample: Charred seeds (naked barley).
Reference: Ratcliffe and Stralker 1996, 62
OxA-3649 3620 ± 70BP
1 sigma 2123-1883 cal BC
2 sigma 2197-1769 cal BC

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Site: East Porth, Tean
Description of site: Midden
Context: Upper half of midden [Layer 3],
Sample: Charred seeds (*Aveda sp.*).
Reference: Ratcliffe and Stralker 1996, 98
OxA-4698 1355 ± 50BP.
1 sigma: 647-688 cal AD
2 sigma: 604-774 cal AD

Site: East Porth, Tean
Description of site: Midden
Context: Lower half of midden [Layer 3],
Sample: Charred seeds (*Hordeum sp.*).
Reference: Ratcliffe and Stralker 1996, 98
OxA-4699 1605 ± 50BP.
1 sigma: 408-536 cal BC
2 sigma: 265-596 cal BC

Site: Halangy Porth, St Mary's
Description of site: House exposed in cliff-section
Context: Fills [6] and [7], hearth [23],
Sample: charcoal (*Ulmu Prunus*)
Reference: Ratcliffe and Stralker 1996, 89
OxA-4696 (2250 ± 50BP).
1 sigma: 390-206 cal BC
2 sigma: 400-174 cal BC

Site: Halangy Porth St Mary's
Description of site: House exposed in cliff-section
Context: Fill [4], hearth [23]
Sample: Charcoal(*Ulmus/Rosa/Culluna*).
Reference: Ratcliffe and Stralker 1996, 89
OxA-4697 (2390 ± 50BP)
1 sigma: 517-398 cal BC
2 sigma: 760-385 cal BC

Site: Halangy Porth, St Mary's
Description of site: House exposed in cliff-section
Context: Fill of house entrance
Sample: Charcoal
Reference: Ashbee 1983 (22), Radiocarbon 1990 (32), 165
HAR-1313 (2260 ± 90BP)
1 sigma: 400-200 cal BC
2 sigma: 518-60 cal BC

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Site: Hillside Farm, Bryher
Description: Porth Cressa cist
Context: Inhumation burial
Sample: Human bone
Reference: Johns (pers. com)
OxA-12095 2098 ± 27BP
OxA-10255 2100 ± 35 BP
Because these two dates are not statistically different (Ward and Wilson 1978) a weighted mean can be taken before calibration. The weighted mean for these dates has been calculated to 2098 ± 21 BP
2 sigma: 200 –45 cal BC

Site: Little Bay, St Martin's
Description of site: House
Context: House 2, Hearth A,
Sample: Charcoal (Oak and Hazel)
Reference: Neal 1983, 52; Radiocarbon 1985 (27), 83
HAR-1715 (3190 ± 110BP)
1 sigma: 1600-1321 cal BC
2 sigma: 1735-1132 cal BC

Site: Little Bay
Description of site: House
Context: House 2, Hearth F
Sample: Charcoal
Reference: Neal 1983
HAR-1726 2780 ± 80BP.
1 sigma: 1005-830 cal BC
2 sigma: 1206-800 cal BC

Site: Little Bay, St Martin's
Description of site: Hearth below House 2
Context: Pit 65 Hearth [60],
Sample: Charcoal (gorse)
Reference: Neal 1983, 52; Radiocarbon 1985 (27), 83
HAR-4324 3490 ± 100BP
1 sigma: 1939-1686 cal BC
2 sigma: 2124-1525 cal BC

Site: Lower Town, St Martins
Description of site: Midden
Context: Midden [site 17],
Sample: Bone (ovicaprid).
Reference: Ratcliffe and Stralker 1996

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OxA-4063 (995 ± 55BP)
1 sigma: 997-1152 cal AD
2 sigma: 902-1178 cal AD

Site: Lower Town, St Martin's
Description of site: Midden
Context: Midden [site 17],
Sample: Shell (limpet).
Reference: Ratcliffe and Stralker 1996
GU-3411 1280 ± 50BP.
1 sigma: 672-778 cal AD
2 sigma: 657-886 cal AD

Site: Lower Town, St Martin's
Description of site: Grave
Context: Burial [site 20]
Sample: Human bone
Reference: Ratcliffe and Stralker 1996
GU-3412 (880 ± 50BP)
1 sigma: 1043-1219 cal AD
2 sigma: 1024-1264 cal AD

Site: Nornour, Eastern Isles
Description of site: House
Context: Lower midden [NN69] in passage between houses 1 and 3
Sample: Charcoal, (Oak and larch)
Reference: Butcher 1978, 29-112
HAR-239 3260 ± 280BP
1 sigma: 1882-1134 cal BC
2 sigma: 2283- 830 cal BC

Site: Nornour, Eastern Isles
Description of site: House
Context: House 5, Fill of hearth 2 [NN71]
Sample: Charcoal.
Reference: Butcher 1978, 29-112
HAR-240 2690 ± 90BP
1 sigma: 918-797 cal BC
2 sigma:1015- 600 cal BC

Site: Nornour, Eastern Isles
Description of site: House
Context: Building 7, Combination of two samples [NN 73]

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Sample: Charcoal [51] and [54]
Reference: Butcher 1978
HAR-459 1840 ± 70BP,
1 sigma: 81-316 cal AD
2 sigma: 24-380 cal AD

Site: Nornour, Eastern Isles
Description of site: House
Context: Building 9, Well sealed midden in the lower fill of this building,
Sample: Charcoal, bulk sample [55],[56],[61],[63],[65] and [67].
Reference: Butcher 1978, 29-112
HAR-457 2990 ± 100BP.
1 sigma: 1389-1047 cal BC
2 sigma: 1487-920 cal BC

Site: Nornour, Eastern Isles
Description of site: House
Context: Midden [NN73] in the lower filling of house 9
Sample: Shell
Reference: Butcher 1978, 29-112
HAR-460 3020 ± 70BP.
(Calibrated using the marine offset of Harkness (1985) 405+/-40).
1 sigma: 1389-1130 cal BC
2 sigma: 1430-1020 cal BC

Site: Porth Cressa, St Mary's.
Description: House exposed in cliff-section
Context: Midden [Layer 3]
Sample: Charcoal (*Rosaceae*)
Reference: Ratcliffe and Straker 1996, 77; Archaometry 1995, 421-22
OxA-4701 3165 ± 55BP.
1 sigma: 1503-1399 cal BC
2 sigma: 1524-1316 cal BC

Site: Porth Cressa, St Mary's
Description: House exposed in cliff-section
Context: Midden [3],
Sample: Shell (*Patella Vulgata*).
Reference: Ratcliffe and Stralker 1996, 77, Archaeometry 1995, 421-22
GU-5413 3250 ± 50BP.
(Calibrated using the marine offset of Harkness (1985), (405+/-40).
1 sigma: 1600-1449 cal BC
2 sigma: 1680-1413 cal BC

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Site: Porth Killier, St Agnes
Description of site: House exposed in cliff-section
Context: Top of midden [layer 14],
Sample: Charred seeds (*Hordeum sp.*).
Reference: Ratcliffe and Stralker 1996, 67; Archaeometry 1995 (37), 421-2
OxA-3647 3220 ± 70BP.
1 sigma: 1597-1414 cal BC
2 sigma: 1682-1320 cal BC

Site: Porth Killier, St Agnes
Description of site: House exposed in cliff-section
Context: Base of midden [layer 14],
Sample: Charred seeds (*Hordeum sp.*)
Reference: Ratcliffe and Stralker 1996, 67; Archaeometry 1995 (37), 421-2
OxA-3648 3170 ± 65BP.
1 sigma: 1517-1325 cal BC
2 sigma: 1600-1265 cal BC

Site: Porth Killier, St Agnes
Description of site:
Context: Layer 5
Sample: Charcoal (*Calluna*).
Reference: Ratcliffe and Stralker 1996, 67; Archaeometry 1995 (37), 421-2
OxA-4700 2935 ± 55BP.
1 sigma: 1258-1021 cal BC
2 sigma: 1369-942 cal BC

Site:West Porth, Samson
Description: House exposed in cliff-section
Context:. Layer 8
Sample: Charred seeds (*Hordeum sativumd*)
Reference: Ratcliffe and Stralker 1996, Archeometry 1994 (36), 363
OxA-3650 2545 ± 65BP
1 sigma: 799-543 cal BC
2 sigma: 826-410 cal BC

Site: West Porth, Samson
Description: House exposed in cliff-section
Context: Layer [8]
Sample: Charcoal (*Ulex sp.*).
Reference: Ratcliffe and Stralker 1996; Archeometry 1994 (36), 363
OxA-3651 2570 ± 65BP.
1 sigma: 803-595 cal BC
2 sigma: 831-414 cal BC

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Radiocarbon dates derived from environmental samples

Site: Par Beach, St Martin's
Description of site: Intertidal deposit (7661.01)
Context: Sample 1 (basal 5cm of exposed peat
Sample: Peat
Reference: Ratcliffe and Stralker 1996, 19
GU-5060 4510 ± 60BP.
1 sigma: 3355- 3095 cal BC
2 sigma: 3486-2933 cal BC

Site: Par Beach, St Martin's
Description of site: Intertidal deposit (7661.02)
Context: Sample 2 (basal 1cm of exposed peat)
Sample: Peat
Reference: Ratcliffe and Stralker 1996, 19
GU-5061 5210 ± 50BP Peat
1 sigma: 4042-3966 cal BC
2 sigma: 4220-3955 cal BC

Site: Par Beach
Description of site: Intertidal deposit (7661.03)
Context: Sample 3 (top 1cm of peat)
Sample: Peat
Reference: Ratcliffe and Stralker 1996, 19
GU-5062 1570 ± 50BP
1 sigma: 425-556 cal AD
2 sigma: 393-616 cal AD

Site: Par Beach
Description of site: Intertidal deposit (7661.02)
Context: Wood in surface of peat
Sample: Wood
Reference: Ratcliffe and Stralker 1996, 19
GU-5222 5410 ± 70BP
1 sigma: 4338-4114 cal BC
2 sigma: 4360-4043 cal BC

Site: Crab's Ledge, Tresco
Description of site: Intertidal deposit (7345.1)
Context: 1.22 m OD
Sample: Sample 2 (top 1cm of exposed peat)
Reference: Ratcliffe and Stralker 1996, 128

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GU-5056 1880 ± 100BP
1 sigma: 31-238 cal AD
2 sigma: 43-339 cal AD

Site: Crab's Ledge, Tresco
Description of site: Intertidal deposit (7345.1)
Context: Sample 2 (basal 1cm of exposed peat)
Sample: Peat
Reference: Ratcliffe and Stralker 1996. 128
GU-5057 1980 ± 80BP..
1 sigma: 50 cal BC-123 cal AD
2 sigma: 195 cal BC-227 cal AD

Site: Crab's Ledge, Tresco
Description of site: Intertidal deposit (7345.1)
Context: Sample 1 (top 1cm of exposed peat)
Sample: Peat
Reference: Ratcliffe and Stralker 1996, 128
GU-5058 1480 ± 80BP
1 sigma: 533-653 cal AD
2 sigma: 416-685 cal AD

Site: Crab's Ledge, Tresco
Description of site: Intertidal deposit (7345.1)
Context: Sample 1 (basal 1cm of exposed peat)
Sample: Peat
Reference: Ratcliffe and Stralker 1996, 128
GU-5059 2180 ± 100BP
1 sigma: 384-61 cal BC
2 sigma: 404 cal BC-47 cal AD

Site: Crab's Ledge, Tresco
Description of site: Intertidal deposit
Context: Column VI (basal 2cm of upper peat)
Sample: Peat
Reference: Ratcliffe and Stralker 1996, 128
GU-5230 1600 ± 60BP
1 sigma: 406-538 cal AD
2 sigma: 263-601 cal AD

Site: Crab's Ledge, Tresco
Description of site: Intertidal deposit
Context: Column VI (top 2cm of middle peat)

APPENDIX A: RADIOCARBON AND MAGNETIC DATES

Sample: Peat
Reference: Ratcliffe and Stralker 1996, 128
GU-5231 1830 ± 90BP
1 sigma: 78-322 cal BC
2 sigma: 36 cal BC-414 cal AD

Site: Crab's Ledge
Description of site: Intertidal deposit
Context: Column VI
Sample: Peat
Reference: Ratcliffe and Stralker 1996, 128
GU-5232 2140 ± 60BP
1 sigma: 350-60 cal BC
2 sigma: 378-1 cal BC

Site: Porth Mellon, St Mary's
Description of site: Intertidal deposit
Context: Sample 1 (top 4cm of exposed peat)
Sample: Peat
Reference: Ratcliffe and Stralker 1996, 129
GU-5393 4280 ± 50BP
1 sigma: 2916-2880 cal BC
2 sigma: 3015-2709 cal BC

Site: Porth Mellon
Description of site: Intertidal deposit
Context: Sample 1 (basal 2cm of exposed peat)
Sample: Peat
Reference: Ratcliffe and Stralker 1996, 129
GU-5394 4310 ± 60BP..
1 sigma: 3006-2883 cal BC
2 sigma: 3085-2765 cal BC

Site: Porth Mellon
Description of site: Intertidal deposit
Context: Sample 2 (2-4cm towards top of peat)
Sample: Peat
Reference: Ratcliffe and Stralker 1996, 129
GU-5395 3900 ± 70BP
1 sigma: 2470-2237 cal BC
2 sigma: 2573-2144 cal BC

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Site: Port Mellon
Description of site: Intertidal deposit
Context: Sample 2 (basal 2cm of exposed peat)
Sample: Peat
Reference: Ratcliffe and Stralker 1996, 129
GU-5396 3980 ±100BP
1 sigma: 2619-2346 cal BC
2 sigma: 2866-2200 cal BC

Site: Porth Mellon
Description of site: Intertidal deposit
Context: Sample 2 (wood from towards base of peat)
Sample: Wood (birch).
Reference: Ratcliffe and Stralker 1996, 129
GU-5392 3810 ± 80BP. (
1 sigma: 2401-2138 cal BC
2 sigma: 2470-1981 cal BC

Site: Higher Moors, St Mary's
Description of site: Topogenous mire
Context: Sample HM:4
Sample: Peat
Reference: Scaife 1984b
HAR-3724 2540 ± 80BP
1 sigma: 801-523 cal BC
2 sigma: 831-404 cal BC

Site: Higher Moors, St Mary's
Description of site: Topogenous mire
Context: Sample HM:3
Sample: Peat
Reference: Scaife 1984b
HAR-3723 2360 ± 70BP., Peat.
1 sigma: 501-386 cal BC
2 sigma: 761-212 cal BC

Site: Higher Moors, St Mary's
Description of site: Topogenous mire
Context: Sample HM:2
Sample: Peat
Reference: Scaife 1984b
HAR-3694 3100 ± 70BP
1 sigma: 1432-1263 cal BC
2 sigma: 1518-1131 cal BC

APPENDIX A: RADIOCARBON AND MAGNETIC DATES

Site: Higher Moors, St Mary's
Description of site: Topogenous mire
Context: Sample HM:1
Sample: Peat
Reference: Scaife 1984b
HAR-3695 6330 ± 100BP.,.
1 sigma: 5464-5151 cal BC
2 sigma: 5479-5045 cal BC

Sit: Big Pool, St Agnes
Description of site: Lake deposit
Context: Lower band of deposit
Sample: Peat and organic sediment
Reference: Scourse 1986
GU-25691030 ± 50BP, ,.
1 sigma: 981-1025 cal AD
2 sigma: 896-1155 cal AD

Site: Big Pool, St Agnes,
Description of site: Lake deposit
Context: Upper band of deposit
Sample: Peat and organic sediment.
Reference: Scoure 1986
GU-2520 280 ±. 50BP,
1 sigma: 1522-1659 cal AD
2 sigma: 1479-1946 cal AD

Magnetic samples

Site: Nornour.
Description of site: House
Context: House 6, Burnt natural soil at base of hearth 1 (contemporary with hearth 2)
SC 50-53,
Declination 3.2 degrees +/-4.5 degrees W; Inclination 69.7 degrees +/- 2.3 degrees (single standard error; normalised to Meriden)

SC 40-45,
House 6, Contents of hearth 2 (contemporary with hearth 1), Declination 3.2 degrees +/-4.5 degrees W; Inclination 69.7 degrees +/- 2.3 degrees (single standard error; normalised to Meriden)

APPENDIX B: THE PRINCIPLE ISLANDS AND ISLETS OF SCILLY

NGR = National Grid Reference
Where no indication of the size of individual island / islet is given in the table these relate to rocky islets which although major landmarks within the Scillonian island landscape, are either to small or intertidal to accurately record.

Island / Islet	NGR	Hectares
Annett	SV 963 086	21.40
Bryher	SV 877 150	126.40
Castle Bryher	SV 864 140	0.40
Crump Island	SV 911 160	
English Island	SV 939 150	
Foreman's Island	SV 900 161	
Gorregan	SV 848 056	1.46
Great, Middle and Little Arthur	SV 941 139	7.68
Great Crebawethan	SV 831 071	0.85
Great Ganilly	SV 947 144	13.19
Great Ganinick	SV 933 138	1.82
Great Innisvouls	SV 953 141	1.54
Green Island (off Samson)	SV 884 125	0.36
Green Island (off Tresco)	SV 903 138	
Great Minalto	SV 870 118	
Gugh	SV 890 084	38.60
Gurther's Island	SV 918 144	
Gweal	SV 867 152	6.15
Hanjague	SV 958 151	
Hangmans Island	SV 882 156	
Hedge Rock	SV 905 159	
Hellwethers	SV 863 079	
Illiswilgig	SV 858 139	1.13
Innisidgen	SV 922 128	
Little Ganinick	SV 935 136	0.89
Little Ganilly	SV 939 142	2.43
Little Innisvouls	SV 955 142	0.65
Maiden Bower	SV 850 144	0.65
Melledgan	SV 862 064	1.46
Men-a-vaur	SV 894 175	1.42
Menawethan	SV 955 136	2.43
Merrick Island (New Grimsby)	SV 884 148	
Merrick Island (Stony Porth)	SV 871 146	
Mincarlo	SV 854 130	1.82
Newford Island	SV 907 112	0.48
Nornour	SV 944 148	1.34

APPENDIX B: THE PRINCIPLE ISLANDS AND ISLETS OF SCILLY

Island / Islet	NGR	Hectares
NorthwetheL	**SV 895 163**	**4.86**
Old Man	SV 905 163	1.17
Pernagie	SV 917 175	0.81
Plumb Island (off St Martin's)	SV 918 170	0.52
Plumb Island (off Tresco)	SV 887 149	
Puffin Island	SV 882 134	0.81
Ragged Island	SV 946 138	
Rosevean	SV 840 057	1.86
Rosevear	SV 839 060	0.85
Round Island	SV 902 177	3.84
Samson	SV 878 128	38.60
Scilly Rock	SV 860 156	1.54
Shipman Head	SV 874 164	
St Agnes	SV 880 082	109.28
St Helen's	SV 900 170	19.94
St Martin's	SV 927 159	221.70
St Mary's	SV 915 115	628.75
Stony Island	SV 886 127	
Taylor's Island	SV 906 115	0.40
Tean	SV 910 164	15.98
Toll's Island	SV 931 119	2.43
Tresco	SV 895 150	297.38
White Island (off Samson)	SV 871 126	1.54
White Island (off St Martin's)	SV 925 175	15.37

APPENDIX C: SITES FROM THE INTERTIDAL ZONE

Key: BA=Bronze Age; IA=Iron Age; RB=Romano-British; PX=Unknown Prehistoric

Site	Description	Date	References	Height OD
Appletree Bay Tresco	Boulder Wall	PX	Ratcliffe	-0.3
Bar Point, St Mary's	Two huts, one with saddle quern in floor; on upper part of beach	PX	Thomas 1985: 304	0.34m
Bathing House Porth, Tresco	Field walls extending within the intertidal zone	PX	Thomas 1985: 304	-0.5m
Crab's Ledge, Tresco	Lowest point of boulder wall on beach, now in intertidal zone	PX	Thomas 1985: 304	-0.63
Crow Bar	? Submerged hut circle located 700m SW of Gurther's Island	PX	Fowler and Thomas 1979 Thomas 1985: 29	-2.5
East Porth Samson	Stonewalls extending out onto Samson Flats	PX	Crawford Fowler and Thomas 1979	0.07m
Green Bay Bryher	Roofless cist of Porth Cressa type Excavated on Beach within the intertidal zone	IA RB	Thomas 1985:303	0.59m
Little Porth, St Mary's	Surface of cultivated field in which Class E imported pottery had been incorporated; now by edge of low narrow beach	RB	Ashbee 1978 Thomas 1985: 1985	0.49m
Neck of Arthur Eastern Isles	Midden associated with hut	IA	Gray 1972: 42 Ashbee 1974: 180	-0.41m
Old Man, Tean	Excavated cist of Porth Cressa type now eroded by sea	IA RB	Tebbutt 1934	0.39m
Par Beach	Stone-walled hut excavated between tides, with Romano British pottery	RB	Neal	1.39m
Par Beach St Martin's	Porth Cressa type cist with contracted burial now buried in sand	IA RB	Crawford 1928:	0.39m
Par Beach St Martin's	Cist within intertidal zone 6m SW of hut (no.7)	BA	O'Neil Ashbee 1974	1.36m
Par Beach, St Martin's	House	BA	O'Neil Ashbee 1974	1.2
Par Beach, St Martin's	House	IA	O'Neil Ashbee 1974	1.97
Par Beach, St Martin's	Small rectangular cist	BA	O'Neil Ashbee 1974	1.97m

APPENDIX C: SITES FROM THE INTERTIDAL ZONE

Key: BA=Bronze Age; IA=Iron Age; RB=Romano-British; PX=Unknown prehistoric;

Site	Description	Date	Reference	Height O.D.
Par Beach, St Martin's	Porth Cressa type cist found within hut circle (no. 19)	IA RB	O'Neil nd.a Ashbee 1974	1.2m
Par Beach, St Martin's	Stone walls	PX	O'Neil Ashbee 1974 Ratcliffe 1990	
Par Beach, St Martin's	Stone walls ?structure associated with hut (7)	RB	O'Neil Ashbee 1978	1.51
Pendle Bay Tresco	Rectangular house foundation, with saddle querns, now high in intertidal zone.	PX	Thomas 1985: 304	0.72m
Pendrathen, St Mary's	Group of three huts near bottom of intertidal zone	BA	Ashbee 1974: 317	-1.41m
Porth Cressa	Hut circle within bay, now submerged	PX	Observed September 2001	-1.1m
Porth Mellon, St Mary's	Hut circle now shrouded beneath sand	PX	Ratcliffe and Stralker 1996: 24	-1m
Porth Morran St Martin's	Boulder walls	PX	Fowler and Thomas 1979 Ratcliffe	-0.9m
Porth Morran St Martin's	Foundation of hut, now below LNT; presumed associated with fields and clearance cairns higher on beach and above shore line	PX	Fowler and Thomas 1979 Thomas 1985: 304	-2.81m
Samson, East Porth	Stone-walled structure with native grass-marked pottery and Class E sherds; on upper part of shingle boulder beach.	RB	Neal 1971 Thomas 1985:186	2.29m
Tean Channel	? Submerged hut circle located between Crumb island and Hedge Rock	PX	Fowler and Thomas 1979 Thomas 1985: 29	-2.41m
Town Beach Bryher	Boulder wall diagonally across higher part of beach, incorporating saddle quern	PX	Thomas 1985: 304	0.86m
West Craggyellis	? Alledged hut circle located West Graggyellis	PX	Fowler and Thomas 1979 Thomas 1985,29	?
West Porth, Tean	Stone structure and midden. Exposed in cliff section	IA RB	Thomas 1978, 184	1.51m
West Porth, Tean	Field walls	PX	Thomas 1978,13	0.09m

APPENDIX D: SETTLEMENT

Site	NGR
Appletree Bay, Tresco	SV 8910 1370
Appletree Point, Tresco	SV 88831449
Bathinghouse Porth, Tresco	SV 8941 1358
Bathinghouse Porth, Tresco	SV 8941 1354
Below Top Rock Hill, St Martin's	SV 9234 1673
Bonfire Carn, Bryher	SV 8801 1423
Burnt Hill, St Martin's	SV 9363 1590
Burnt Hill, St Martin's	SV 9365 1599
Burnt Hill, St Martin's	SV 9365 1596
Carn Leh, St Mary's	SV 9138 0990
Carn Windlass, Annet	SV 8631 0843
Dial Rocks, Tresco	SV 8889 1558
Dial Rocks, Tresco	SV 8890 1559
Dial Rocks, Tresco	SV 8891 1558
Dial Rocks, Tresco	SV 8893 1560
East Porth, Tean	SV 9095 1627
East Side of Barnaby Lane, St Agnes	SV 8831 0788
East Side of Barnaby Lane, St Agnes	SV 8829 0791
East Side of Porth Cressa, St Mary's	SV 9064 1012
English Island Carn, St Martin's	SV 9380 1526
English Island Carn, St Martin's	SV 9377 1525
Gimble Porth, Tresco	SV 8874 1619
Gimble Porth, Tresco	SV 8874 1625
Gimble Porth, Tresco	SV 8877 1630
Gimble Porth, Tresco	SV 8881 1632
Great Bay, St Martin's	SV 9240 1646
Great Bay, St Martin's (alleged)	SV 9240 1646
Great Ganilly, Eastern Isles	SV 9472 1441
Great Hill, Tean	SV 9098 1654
Halangy Down, St Mary's (8)	SV 9100 1220
Halangy Porth, St Mary's	SV 9090 1247
Halangy Porth, St Mary's	SV 9091 1251
Heathy Hill, Bryher (2)	SV 8736 1437
Higher Town, St Agnes	SV 8838 0833
Hoe Point, Gugh (alleged)	SV 89130786
John Batty's Hill, St Martin's	SV 9382 1563
John Batty's Hill, St Martin's	SV 9379 1563
John Batty's Hill, St Martin's	SV 9378 1562
Kipper Carn, Tean	SV 9078 1655
Kipper Carn, Tean	SV 9069 1659
Kittern Hill ,Gugh	SV 8889 0870

APPENDIX D: SETTLEMENT

Site	NGR
Kittern Hill, Gugh	8887 0871
Kittern Hill, Gugh	SV 8896 0866
Kittern Hill, Gugh	SV 8886 0872
Lawrence's Brow, St Martin's (destroyed)	SV 9237 1573
Little Arthur, Eastern Isles	SV 9410 1391
Little Arthur, Eastern Isles	SV 9411 1393
Little Arthur, Eastern Isles (destroyed)	SV 941 138
Little Bay, St Martin's (5)	SV 9231 1662
Little Porth, St Mary's (Alleged)	SV 9180 1294
Little Porth, St Mary's	SV 9185 1286
Little Porth, St Mary's (Alleged)	SV 9181 1292
May's Hill, St Martin's	SV 9364 1555
Neck of Samson, Samson	SV 878 124
Nornour, Eastern Isles (12)	SV 9444 1478
North of Tregarthen Hill, Tresco	SV 8868 1638
North of Tregarthen Hill, Tresco	SV 8868 1645
North of Tregarthen Hill, Tresco	SV 8868 1645
North of Tregarthen Hill, Tresco	SV 8870 1648
North of Tregarthen Hill, Tresco	SV 8871 1637
North of Tregarthen Hill, Tresco	SV 8866 1637
North of Tregarthen Hill, Tresco	SV 8876 1640
North of Tregarthen Hill, Tresco	SV 8860 1644
North of Tregarthen Hill, Tresco	SV 8862 1643
North of Tregarthen Hill, Tresco	SV 8864 1641
North of Tregarthen Hill, Tresco	SV 8864 1641
North of Tregarthen Hill, Tresco	SV 8866 1642
North of Tregarthen Hill, Tresco	SV 8867 1644
North side of South Hill, Samson	SV 8775 1252
North side of South Hill, Samson	SV 8777 1252
North side of South Hill, Samson	SV 8774 1229
North Side of St Helens (alleged)	SV 8991 1721
Northwethel	SV 8948 1636
Northwethel	SV 8950 1637
Northwethel	SV 8954 1635
Northwethel	SV 8950 1632
Northwethel	SV 8950 1630
Northwethel	SV 891629
Old Man, Tean (alleged)	SV 9045 1617
Par Beach, St Martin's	SV 932 153
Par Beach, St Martin's	SV 932 153
Par Beach, St Martin's	SV 932 153

APPENDIX D: SETTLEMENT

Site	NGR
Parsonage Field, St Mary's (alleged)	SV 923 159
Pendrathen, St Mary's	SV 9148 1279
Pendrathen, St Mary's	SV 9149 1279
Pendrathen, St Mary's (alleged)	SV 9148 1274
Pendrathen, St Mary's (destroyed)	SV 9150 1280
Pendrathen, St Mary's (destroyed)	SV 9151 1281
Perpitch, St Martin's (destroyed)	SV 9409 1552
Porth Cressa Bay, St Mary's	SV 9010 1023
Porth Minnick, St Mary's	SV 9184 1007
Porth Morran, St Martins (alleged)	SV 9235 1743
Porth Morran, White Island	SV 9244 1733
Porth Morran, White Island (alleged)	SV 9220 1763
Poth Killier, St Agnes (3)	SV 8810 0848
Poynter's Garden, St Mary's	SV 9019 1051
Samson Flats (2)	SV 880 128
South East of Higher Town, St Martin's (alleged)	SV 9325 1545
South of Point of Fields, St Martin's (3) (alleged)	SV 9144 1622
South side of South Hill, Samson	SV 8779 1231
South West of the Bar, Bryher (2)	SV 8812 1507
St Helens Porth, Tean	SV 9050 1650
Tol Tuppens, Gugh	SV 8865 0863
Tol Tuppens, Gugh	SV 8867 0867
Tol Tuppens, Gugh (2)	SV 8866 0866
Toll's Hill, St Mary's	SV 9280 1214
Toll's Hill, St Mary's (alleged)	SV 924 120
Top of the Hill, St Agnes	SV 8832 0835
Top Rock Hill, St Martin's	SV 9220 1660
Top Rock Valley, St Martin's (alleged)	SV 9226 1684
Tregea's Porth, St Mary's	SV 9255 1215
West Broad Ledge, Tean	SV 912 156
West of Bar Point, St Mary's	SV 8785 1320
West of Bar Point, St Mary's	SV 8785 1320
West Side of Bar Point, St Mary's	SV 9154 1290
West side of East Porth, Tean	SV 9081 1636
West Side of Porth Conger, St Agnes	SV 8848 0842
West side of Samson, Samson	SV 8760 1304

APPENDIX E: ENTRANCE GRAVES

Site	NGR
Arden Craig (alleged)	SV 9200 1170
Arthur Head, Eastern Isles	SV 9417 1353
Arthur Head, Eastern Isles	SV 9418 1353
Arthur Head, Eastern Isles	SV 9424 1355
Halangy Porth, St Mary's	SV 9095 1240
Bant's Carn, St Mary's	SV 9099 1230
Borough Farm, Tresco (alleged)	SV 9198 1198
Buzza Hill, St Mary's	SV 90591038
Buzza Hill, St Mary's (destroyed)	SV 906 104
Buzza Hill, St Mary's (destroyed)	SV 906 104
Carn of Works	SV 8782 1413
Carn of Works, Gugh	SV 8915 0800
Carn Valla, Gugh	SV 8886
Chapel Brow, St Martin's (alleged)	SV 9420 1611
Clapper of Works, Gugh	SV 8902 0794
Cruther's Hill, St Martin's	SV 9295 1513
Cruther's Hill, St Martin's	SV 9291 1517
Cruther's Hill, St Martin's	SV 9289 1522
Drum Rock, St Mary's	SV 9233 1065
Drum Rock, St Mary's	SV 9234 1064
Great Hill, Tean	SV 9098 1655
Great Hill, Tean	SV 9102 1651
Great Stitch (alleged)	SV 90 12
Gweal Hill, Bryher	SV 8716 1492
Helvear Down, St Mary's	SV 9193 1265
Upper Innisidgen, St Mary's	SV 9218 1264
Lower Innisidgen, St Mary's	SV 9211 1271
Kittern Hill, Gugh	SV 8879 0866
Kittern Hill, Gugh	SV 8889 0861
Kittern Hill, Gugh	SV 8895 0860
Knackboy Cairn, St Martin's	SV 9235 1586
Little Arthur, Eastern Isles	SV 9412 1389
Little Arthur, Eastern Isles	SV 9413 1387
Little Arthur, Eastern Isles	SV 9412 1388
Middle Arthur, Eastern Isles	SV 9398 1382
Middle Arthur, Eastern Isles	SV 9398 1380
Mount Todden, St Mary's	SV 9286 1149
Normandy Down, St Mary's	SV 9307 1117
Normandy Down, St Mary's	SV 9301 1117
Normandy Down, St Mary's	SV 9297 1118
North Hill, Samson	SV 8771 1324
North Hill, Samson	SV 8770 1309
North Hill, Samson	SV 8774 1308
North Hill, Samson	SV 8771 1307

APPENDIX E: ENTRANCE GRAVES

Site	NGR
North Hill, Samson	SV 8773 1306
North Hill, Samson	SV 8773 1304
North Hill, Samson	SV 8772 1302
North Hill, Samson	SV 8773 1299
North Hill, Samson	SV 8777 1292
North Hill, Samson	SV 8778 1291
North Hill, Samson	SV 8772 1300
North side of Chapel Down, St Martin's	SV 9408 1606
Obadiah's Barrow, Gugh	SV 8880 0851
Old Man, Gugh	SV 9049 1631
Old Town, St Mary's (alleged)	SV 91 10
Giant's Grave, St Mary's (alleged)	SV 92 12
Porth Hellick Down, St Mary's	SV 9285 1073
Porth Hellick Down, St Mary's	SV 9289 1065
Porth Hellick Down (alleged)	SV 9282 1055
Porth Hellick Down	SV 9289 1061
Loaded Camel, Porth Hellick Down, St Mary's	SV 9281 1069
Great Tomb, Porth Hellick Down, St Mary's	SV 9284 1089
Porth Hellick Down, St Mary's	SV 9288 1072
Peters Barrow Porth Hellick Down, St Mary's	SV 9285 1069
Pig Rock, St Mary's	SV 9249 1039
Pig Rock, St Mary's	SV 9247 1039
Pig Rock, St Mary's	SV 9247 1037
Salakee Down, St Mary's (destroyed)	SV 9217 1027
Salakee Down, St Mary's	SV 9218 1016
Samson Hill, Bryher	SV 8778 1426
Samson Hill, Bryher	SV 8793 1425
Northwethel	SV 8960 1628
Shipman Head Down	SV 8762 1540
Shipman Head Down, St Martin's (alleged)	SV 8786 1566
Shipman Head Down, St Martin's (alleged)	SV 8773 1544
South Hill, Samson	SV 8785 1240
South Hill, Samson	SV 8786 1239
South Hill, Samson	SV 8787 1237
South Hill, Samson	SV 8795 1236
South Hill, Samson (alleged)	SV 8786 1238
South-east side of Chapel Down, St Martin's	SV 9438 1574
Top Rock Hill, St Martin's	SV 9221 1673
Tregarthen Hill, Tresco	SV 8864 1626
White Island, St Martin's	SV 9224 1762

APPENDIX F: CAIRNS

Site	NGR
Bad Place Hill, Bryher	SV 8751 1651
Shipman's Head Down, Bryher	SV 8786 1573
Bad place Hill, Bryher	SV 8752 1614
West side of Shipman's Head, Bryher	SV 8758 1602
Great Bottom, Bryher	SV 8767 1602
The Brow, Bryher	SV 8805 1438
Samson Hill, Bryher	SV 8793 1423
North Side of Shipman's Head Down, Bryher	SV 8777 1584
Great Bottom, Bryher	SV 8765 1601
Anchor Carn, Bryher	SV 8772 1582
Great Bottom, Bryher	SV 8770 1599
Great Bottom, Bryher	SV 8772 1599
Great Bottom, Bryher	SV 8773 1597
Great Bottom, Bryher	SV 8772 1595
Great Bottom, Bryher	SV 8772 1593
Great Bottom, Bryher	SV 8775 1594
Great Bottom, Bryher	SV 8774 1583
Great Bottom, Bryher	SV 8777 1585
Great Bottom, Bryher	SV 8771 1592
Great Bottom, Bryher	SV 8773 1602
Great Bottom, Bryher	SV 8780 1587
Gweal Hill, Bryher	SV 8714 1490
Gweal Hill, Bryher	SV 8715 1491
Samson Hill, Bryher	SV 8781 1427
Shipman's Head Down, Bryher	SV 8776 1575
Shipman's Head Down, Bryher	SV 8778 1574
Shipman's Head Down, Bryher	SV 8779 1574
Shipman's Head Down, Bryher	SV 878 1571
Shipman's Head Down, Bryher	SV 8778 1571
Shipman's Head Down, Bryher	SV 8776 1570
Shipman's Head Down, Bryher	SV 8774 1569
Shipman's Head Down, Bryher	SV 8773 1572
Shipman's Head Down, Bryher	SV 8771 1570
Shipman's Head Down, Bryher	SV 8772 1569
Shipman's Head Down, Bryher	SV 8769 1570
Shipman's Head Down, Bryher	SV 8768 1568
Shipman's Head Down, Bryher	SV 8775 1567

APPENDIX F: CAIRNS

Site	NGR
Shipman's Head Down, Bryher	SV 8776 1566
Shipman's Head Down, Bryher	SV 8778 1564
Shipman's Head Down, Bryher	SV 8772 1563
Shipman's Head Down, Bryher	SV 8771 1565
Shipman's Head Down, Bryher	SV 8767 1565
Shipman's Head Down, Bryher	SV 8765 1564
Shipman's Head Down, Bryher	SV 8764 1563
Shipman's Head Down, Bryher	SV 8763 1565
Shipman's Head Down, Bryher	SV 8765 1567
Shipman's Head Down, Bryher	SV 8774 1564
Shipman's Head Down, Bryher	SV 8772 1574
Shipman's Head Down, Bryher	SV 8771 1561
South West Side of Shipman's Head Down, Bryher	SV 8753 1555
South West Side of Shipman's Head Down, Bryher	SV 8764 1556
South West Side of Shipman's Head Down, Bryher	SV 8767 1555
South West Side of Shipman's Head Down, Bryher	SV 8766 1554
South West Side of Shipman's Head Down, Bryher	SV 8759 1552
South West of Shipman's Head Down, Bryher	SV 8751 1551
South West Shipman's Head Down, Bryher	SV 8756 1549
South West Side of Shipman's Head, Bryher	SV 8759 1546
South West Side of Shipman's Head Down, Bryher	SV 8755 1546
South West Side of Shipman's Head, Bryher	SV 8753 1547
South West Side of Shipman's Head Down, Bryher	SV 8748 1547
South West Side of Shipman's Head Down, Bryher	SV 8744 1545
South West Side of Shipman's Head Down, Bryher	SV 8748 1543
South West Side of Shipman's Head, Bryher	SV 8753 1544
South West Side of Shipman's Head, Bryher	SV 8755 1555
South West of Shipman's Head, Bryher	SV 8757 1555
South West Side of Shipman's Head, Bryher	SV 8760 1556
South West Side of Shipman's Head, Bryher	SV 8754 1553
South West Side of Shipman's Head, Bryher	SV 8761 1548
South West Side of Shipman's Head, Bryher	SV 8762 1558
South Side of Shipman's Head Down, Bryher	SV 8772 1557
South Side of Shipman's Head Down, Bryher	SV 8771 1554
South Side of Shipman's Head Down, Bryher	SV 8769 1552
South Side of Shipman's Head Down, Bryher	SV 8776 1547
South Side of Shipman's Head, Bryher	SV 8767 1544

APPENDIX F: CAIRNS

Site	**NGR**
South Side of Shipman's Head, Bryher	SV 8764 1546
South Side of Shipman's Head, Bryher	SV 8763 1544
South Side of Shipman's Head, Bryher	SV 8760 1544
South Side of Shipman's Head Down, Bryher	SV 8747 1542
South Side of Shipman's Head Down, Bryher	SV 8759 1541
South Side of Shipman's Head Down, Bryher	SV 8773 1544
North East Side of Shipman's Head Down, Bryher	SV 8779 1579
North East Side of Shipman's Head Down, Bryher	SV 8781 1575
North East Side of Shipman's Head Down, Bryher	SV 8785 1578
North East Side of Shipman's Head Down, Bryher	SV 8782 1577
North East Side of Shipman's Head Down, Bryher	SV 8783 1577
North East Side of Shipman's Head Down, Bryher	SV 8784 1574
North East Side of Shipman's Head Down, Bryher	SV 8780 1578
South East Side of Shipman's Head Down, Bryher	SV 8792 1565
South East Side of Shipman's Head Down, Bryher	SV 8790 1563
South East Side of Shipman's Head Down, Bryher	SV 8788 1563
South East Side of Shipman's Head Down, Bryher	SV 8789 1560
South East Side of Shipman's Head Down, Bryher	SV 8786 1557
South East Side of Shipman's Head Down, Bryher	SV 8788 1556
South East Side of Shipman's Head Down, Bryher	SV 8788 1569
South East Side of Shipman's Head Down, Bryher	SV 8789 1561
Shipman's Head Down, Bryher	SV 8781 1564
Shipman's Head Down, Bryher	SV 8778 1561
Shipman's Head Down, Bryher	SV 8778 1558
Shipman's Head Down, Bryher	SV 8781 1556
Shipman's Head Down, Bryher	SV 8778 1580
Shipman's Head Down, Bryher	SV 8778 1579
Shipman's Head Down, Bryher	SV 8779 1578
Shipman's Head Down, Bryher	SV 8780 1576
Shipman's Head Down, Bryher	SV 8788 1574
Shipman's Head Down, Bryher	SV 8784 1571
Shipman's Head Down, Bryher	SV 8785 1570
Shipman's Head Down, Bryher	SV 8786 1568
Shipman's Head Down, Bryher	SV 8788 1566
Shipman's Head Down, Bryher	SV 8780 1566
Shipman's Head Down, Bryher	SV 8789 1563
Shipman's Head Down, Bryher	SV 8787 1562

APPENDIX F: CAIRNS

Site	NGR
Shipman's Head Down, Bryher	SV 8786 1561
Shipman's Head Down, Bryher	SV 8786 1560
Shipman's Head Down, Bryher	SV 8785 1559
Shipman's Head Down, Bryher	SV 8785 1557
Shipman's Head Down, Bryher	SV 8784 1556
Shipman's Head Down, Bryher	SV 8784 1554
Shipman's Head Down, Bryher	SV 8786 1552
Shipman's Head Down, Bryher	SV 8777 1560
Shipman's Head Down, Bryher	SV 8777 1559
Shipman's Head Down, Bryher	SV 8777 1558
Shipman's Head Down, Bryher	SV 8778 1553
Shipman's Head Down, Bryher	SV 8778 1552
Shipman's Head Down, Bryher	SV 8779 1549
Shipman's Head Down, Bryher	SV 8781 1547
Shipman's Head Down, Bryher	SV 8776 1561
Shipman's Head Down, Bryher	SV 8772 1560
Shipman's Head Down, Bryher	SV 8787 1573
Shipman's Head Down, Bryher	SV 8787 1566
Shipman's Head Down, Bryher	SV 8780 1548
Shipman's Head Down, Bryher	SV 8768 1560
Shipman's Head Down, Bryher	SV 8784 1555
Shipman's Head Down, Bryher	SV 8784 1551
Shipman's Head Down, Bryher	SV 8778 1551
Shipman's Head Down, Bryher	SV 8774 1561
Shipman's Head Down, Bryher	SV 8770 1560
South Side of Shipman's Head Down, Bryher	SV 8765 1538
South Side of Shipman's Head Down, Bryher	SV 8772 1542
Shipman's Head Down, Bryher	SV 8768 1566
Great Ganilly, Eastern Isles	SV 9455 1455
Arthur Head, Eastern Isles	SV 9417 1353
Great Ganilly, Eastern Isles	SV 9461 1459
Arthur Head, Eastern Isles	SV 9418 1353
Arthur Head, Eastern Isles	SV 9419 1355
Arthur Head, Eastern Isles	SV 9418 1355
Middle Arthur, Eastern Isles	SV 9398 1380
Menawethan, Eastern Isles	SV 9553 1366
Kittern Hill, Gugh	SV 8881 0866

APPENDIX F: CAIRNS

Site	NGR
Carn of works, Gugh	SV 8913 0804
Carn of Works, Gugh	SV 8916 0804
Carn of Works, Gugh	SV 8919 0807
Carn of Works, Gugh	SV 8920 0803
Carn of Works, Gugh	SV 8922 0805
Carn of Works, Gugh	SV 8927 0805
Carn of Works, Gugh	SV 8926 0810
Kittern Hill, Gugh	SV 8879 0864
Kittern Hill, Gugh	SV 8879 0865
Kittern Hill, Gugh	SV 8883 0865
Kittern Hill, Gugh	SV 8886 0863
Kittern Hill, Gugh	SV 8889 0859
Kittern Hill, Gugh	SV 8883 0861
Kittern Hill, Gugh	SV 8883 0860
Kittern Hill, Gugh	SV 8886 0860
Kittern Hill, Gugh	SV 8893 0861
Kittern Hill, Gugh	SV 8876 0864
Kittern Hill, Gugh	SV 8878 0863
Kittern Hill, Gugh	SV 8885 0864
Carn Kimbra, Gugh	SV 8916 0841
Hoe Point, Gugh	SV 8910 0788
South east side of Northwethel	SV 8962 1626
South east side of Northwethel	SV 8958 1623
South east side of Northwethel	SV 8964 1628
North Hill, Samson	SV 8771 1317
North Hill, Samson	SV 8771 1305
North Hill, Samson	SV 8772 1304
North Hill, Samson	SV 8775 1297
North Hill, Samson	SV 8775 1295
North Hill, Samson	SV 8777 1292
North Hill, Samson	SV 8781 1288
North side of East Porth, Samson	SV 878 128
North side of East Porth, Samson	SV 878 128
South east side of South Hill	SV 8796 1229
South Hill, Samson	SV 8771 1250
South Hill, Samson	SV 8777 1246
South Hill, Samson	SV 8787 1235

APPENDIX F: CAIRNS

Site	NGR
Carn of Cove Vean, St Agnes	SV 8831 0787
Clapper of Works, Gugh	SV 8906 0797
Clapper of Works, Gugh	SV 8907 0796
Clapper of Works, Gugh	SV 8909 0797
Carn of Cove Vean, St Agnes	SV 8846 0787
Carn of Cove Vean, St Agnes	SV 8846 0779
Carn of Cove Vean, St Agnes	SV 8848 0783
Carn of Cove Vean, St Agnes	SV 8853 0782
Carn of Cove Vean, St Agnes	SV 8855 0786
Carn of Cove Vean, St Agnes	SV 8856 0787
Carn of Cove Vean, St Agnes	SV 8856 0785
Carn of Cove Vean, St Agnes	SV 8858 0776
Carn of Cove Vean, St Agnes	SV 8854 0782
Tolgillian, St Agnes	SV 8860 0773
West side of Wingletang Down, St Agnes	SV 8817 0764
West side of Wingletang Down, St Agnes	SV 8825 0748
West side of Wingletang Down, St Agnes	SV 8828 0747
West of Wingletang Down, St Agnes	SV 8823 0754
West of Wingletang Down, St Agnes	SV 8836 0751
West of Wingletang Down, St Agnes	SV 8837 0750
West side of Wingletang Down, St Agnes	SV 8837 0758
West of Wingletang Down, St Agnes	SV 8836 0762
West of Wingletang Down, St Agnes	SV 8833 0758
East side of Wingletang Down, St Agnes	SV 8842 0765
East side of Wingletang Down, St Agnes	SV 8844 0763
East side of Wingletang Down, St Agnes	SV 8849 0757
East side of Wingletang Down, St Agnes	SV 8850 0758
East side of Wingletang Down, St Agnes	SV 8850 0754
East side of Wingletang Down, St Agnes	SV 8852 0753
East side of Wingletang Down, St Agnes	SV 8854 0752
East side of Wingletang Down, St Agnes	SV 8858 0753
East side of Wingletang Down, St Agnes	SV 8857 0755
East side of Wingletang Down, St Agnes	SV 8857 0756
East side of Wingletang Down, St Agnes	SV 8860 0761
East side of Wingletang Down, St Agnes	SV 8855 0761
East side of Wingletang Down, St Agnes	SV 8849 0762
East side of Wingletang Down, St Agnes	SV 8851 0766

APPENDIX F: CAIRNS

Site	NGR
East side of Wingletang Down, St Agnes	SV 8853 0767
East side of Wingletang Down, St Agnes	SV 8848 0772
East side of Wingletang Down, St Agnes	SV 8852 0770
South of Porth Askin, St Agnes	SV 8814 0730
South of Porth Askin, St Agnes	SV 8816 0727
South of Porth Askin, St Agnes	SV 8819 0727
South of Porth Askin, St Agnes	SV 8824 0732
South of Porth Askin, St Agnes	SV 8839 0726
South of Porth Askin, St Agnes	SV 8835 0721
Clapper of Works, Gugh	SV 8897 0807
Clapper of Works, Gugh	SV 8896 0805
Clapper of Works, Gugh	SV 8898 0806
Clapper of Works, Gugh	SV 8901 0805
Clapper of Works, Gugh	SV 8899 0799
Clapper of Works, Gugh	SV 8901 0800
Clapper of Works, Gugh	SV 8905 0803
Clapper of Works, Gugh	SV 8907 0802
Gugh	SV 8879 0868
East side of St Helen's	SV 9009 1696
North Side of St Helens	SV 8995 1708
North Side of St Helens	SV 8996 1719
North Side of St Helens	SV 8991 1718
North side of Chapel Down, St Martin's	SV 9419 1612
North side of Chapel Down, St Martin's	SV 9408 1606
East side of Chapel Down, St Martin's	SV 9419 1579
East side of Chapel Down, St Martin's	SV 9411 1588
East side of Chapel Down, St Martin's	SV 9415 1596
East side of Chapel Down, St Martin's	SV 9421 1588
Turfy Hill, St Martin's	SV 9307 1600
Hillbennigates, St Martin's	SV 9354 1580
Chapel Down, St Martin's	SV 9383 1573
Chapel Down, St Martin's	SV 9390 1573
Chapel Down, St Martin's	SV 9393 1574
Chapel Down, St Martin's	SV 9398 1573
Chapel Down, St Martin's	SV 9396 1580
Chapel Down, St Martin's	SV 9401 1573
Chapel Down, St Martin's	SV 9402 1572

APPENDIX F: CAIRNS

Site	**NGR**
Chapel Down, St Martin's	SV 9403 1572
Cruther's Hill, St Martin's	SV 9296 1512
East of Plains House, St Martin's	SV 9264 1590
Tinker's Hill, St Martin's	SV 9179 1638
Tinker's Hill, St Martin's	SV 9181 1638
Chapel Down (North side), St Martin's	SV 9417 1610
Chapel Brow, St Martin's	SV 9418 1609
Gun Hill, St Martin's	SV 9390 1537
John Batty's Hill St Martin's	SV 9380 1553
Par Beach, St Martin's	SV 932 153
Tinker's Hill, St Martin's	SV 9173 1637
Tinker's Hill, St Martin's	SV 91671631
Top Rock Hill, St Martin's	SV 9221 1673
Top Rock Hill, St Martin's	SV 9222 1660
South East Side of Chapel Down, St Martin's	SV 9431 1570
Peninnis Head, St Mary's	SV 91030957
Normandy Down, St Mary's	SV 9290 1114
Peninnis Head, St Mary's	SV 9101 0947
Peninnis Head, St Mary's	SV 9102 0948
Peninnis Head, St Mary's	SV 9116 0948
Porth Hellick Down, St Mary's	SV 9284 1065
Porth Hellick Down, St Mary's	SV 9285 1075
Salakee Down, St Mary's	SV 9231 1025
Salakee Down, St Mary's	SV 9227 1008
Salakee Down, St Mary's	SV 9222 1009
Salakee Down, St Mary's	SV 9218 1011
Salakee Down, St Mary's	SV 9221 1009
Salakee Down, St Mary's	SV 9228 1003
East Side of King Edwards Road, St Mary's	SV 9081
East of Helvear, St Mary's	SV 9223 1232
Pendrathen, St Mary's	SV 9151 1276
Porth Hellick Down, St Mary's	SV 92851073
North East of Salakee Farm, St Mary's	SV 9226 1073
South of Content Farm, St Mary's	SV 91391162
Salakee Down, St Mary's	SV 9222 1008
Carn Morval Down, St Mary's	SV 9075 1199
North East of Salakee Down, St Mary's	SV 9247 1037

APPENDIX F: CAIRNS

Site	NGR
Inner Blue Cairn, St Mary's	SV 9190 1010
Buzza Hill, St Mary's	SV 9059 1037
North West Side Innisidgen Hill, St Mary's	SV 9208 1267
West Porth, Tean	SV 9063 1627
North side of Castle Down, Tresco	SV 8841 1647
North side of Castle Down, Tresco	SV 8838 1646
Abbey Hill, Tresco	SV 8904 1431
Abbey Hill, Tresco	SV 8904 1428
Abbey Hill, Tresco	SV 8905 1436
Abbey Hill, Tresco	SV 8905 1434
West side of Castle Down, Tresco	SV 8861 1578
West side of Castle Down, Tresco	SV 8862 1577
West side of Castle Down, Tresco	SV 8864 1573
West side of Castle Down, Tresco	SV 8865 1570
West side of Castle Down, Tresco	SV 8862 1565
West Side of Castle Down, Tresco	SV 8864 1582
West Side of Castle Down, Tresco	SV 8870 1572
West Side of Castle Down, Tresco	SV 8860 1554
West Side of Castle Down, Tresco	SV 8863 1565
Borough Farm, Tresco	SV 8976 1491
Borough of Rock, Tresco	SV 8973 1495
North side of Castle Down, Tresco	SV 8842 1643
North side of Castle Down, Tresco	SV 8832 1639
North side of Castle Down, Tresco	SV 8836 1640
North side of Castle Down, Tresco	SV 8835 1639
North side of Castle Down, Tresco	SV 8834 1637
North side of Castle Down, Tresco	SV 8833 1635
North side of Castle Down, Tresco	SV 8836 1637
North side of Castle Down, Tresco	SV 8832 1633
North side of Castle Down, Tresco	SV 8826 1630
North side of Castle Down, Tresco	SV 8829 1627
North side of Castle Down, Tresco	SV 8833 1631
North side of Castle Down, Tresco	SV 8837 1630
North side of Castle Down, Tresco	SV 8838 1626
North side of Castle Down, Tresco	SV 8839 1625
North side of Castle Down, Tresco	SV 8843 1632
North side of Castle Down, Tresco	SV 8846 1633

APPENDIX F: CAIRNS

Site	NGR
North side of Castle Down, Tresco	SV 8842 1635
North side of Castle Down, Tresco	SV 8845 1638
North side of Castle Down, Tresco	SV 8854 1641
North side of Castle Down, Tresco	SV 8857 1640
North side of Castle Down, Tresco	SV 8861 1642
North side of Castle Down, Tresco	SV 8862 1644
North side of Castle Down, Tresco	SV 8866 1643
North side of Castle Down, Tresco	SV 8865 1647
North side of Castle Down, Tresco	SV 8866 1646
North side of Castle Down, Tresco	SV 8856 1644
North side of Castle Down, Tresco	SV 8841 1631
North side of Castle Down, Tresco	SV 8840 1629
North side of Castle Down, Tresco	SV 8846 1628
North side of Castle Down, Tresco	SV 8825 1628
North side of Castle Down, Tresco	SV 8832 1618
North side of Castle Down, Tresco	SV 8823 1633
North side of Castle Down, Tresco	SV 8855 1631
Tregarthen's Hill, Tresco	SV 8861 1632
Tregarthen's Hill, Tresco	SV 8864 1628
North west side of Castle Down, Tresco	SV 8823 1625
North side of Castle Down, Tresco	SV 8825 1612
Castle Down, Tresco	SV 8848 1622
Castle Down, Tresco	SV 8845 1620
Castle Down, Tresco	SV 8857 1624
Castle Down, Tresco	SV 8857 1624
Castle Down, Tresco	SV 8846 1617
Castle Down, Tresco	SV 8847 1614
Castle Down, Tresco	SV 8843 1611
Castle Down, Tresco	SV 8848 1609
Castle Down, Tresco	SV 8853 1609
Castle Down, Tresco	SV 8864 1610
Castle Down, Tresco	SV 8854 1603
Castle Down, Tresco	SV 8845 1603
Castle Down, Tresco	SV 8846 1601
Castle Down, Tresco	SV 8864 1601
Castle Down, Tresco	SV 8865 1600
Castle Down, Tresco	SV 8867 1601

APPENDIX F: CAIRNS

Site	**NGR**
Castle Down, Tresco	SV 8856 1627
Castle Down, Tresco	SV 8858 1609
Castle Down, Tresco	SV 8851 1605
Castle Down, Tresco	SV 8859 1613
Castle Down, Tresco	SV 8847 1605
Castle Down, Tresco	SV 8850 1598
Castle Down, Tresco	SV 8853 1599
Castle Down, Tresco	SV 8853 1592
Castle Down, Tresco	SV 8872 1588
Castle Down, Tresco	SV 8875 1591
Castle Down, Tresco	SV 8866 1597
Castle Down, Tresco	SV 8864 1599
Castle Down, Tresco	SV 8868 1592
Castle Down, Tresco	SV 8871 1588
Castle Down, Tresco	SV 8873 1581
Castle Down, Tresco	SV 8855 1630
Castle Down, Tresco	SV 8843 1615
Vane Hill, Tresco	SV 8909 1522
Vane Hill, Tresco	SV 8909 1520
Vane Hill, Tresco	SV 8906 1517
Vane Hill, Tresco	SV 8903 1517
White Island	SV 9248 1762
White Island	SV 9242 1762
White Island	SV 9230 1752
White Island	SV 9229 1754
White Island	SV 9233 1756
White Island	SV 9232 1754
White Island	SV 9242 1755
White Island	SV 9233 1760

APPENDIX G: FLAT CISTS

Site	NGR
North Hill, Samson	SV 8778 1291
Par Beach, St Martin's	SV 938 152
Arthur Porth, Eastern Isles	SV 9408 1386
Watch Hill, Bryher, (destroyed)	SV 880 152
Carn Morval Down, St Mary's (destroyed)	SV 9113 1203
Lower Newford, St Mary's (destroyed)	SV 9165 1200
Town Lane, St Mary's (destroyed)	SV 9157 1175
Near Town Lane, St Mary's (alleged)	SV 916 118
South East of Tolman Carns, St Mary's (alleged)	SV 9146 1012
North of Trelawny, St Martin's	SV 928 158
North of Borough Farm, Tresco (destroyed)	SV 8999 1499
Little Arthur, Eastern Isles (destroyed)	SV 9416 1388
Tolman Carn, St Mary's, (destroyed)	SV 9150 1004
West of Church Point, St Mary's, (destroyed)	SV 9224 0999

APPENDIX H: STANDING STONES

Site	NGR
Cruther's Hill, St Martin's	SV 9296 1518
Gun Hill, St Martin's	SV 9386 1531
Halangy Down, St Mary's	SV 9098 1237
Helvear Farm, St Mary's	SV 9208 1231
Long Rock, St Mary's	SV 9136 1240
Mount Flagon, St Mary's	SV 9095 1093
Higher Town, St Martin's	SV 9312 1581
Old Man, Gugh	SV 8905 0845
Chapel Down, St Martin's	SV 9438 1574

APPENDIX I: PORTH CRESSA CISTS

Site	Number of cists	NGR
East Porth, Samson	1	SV 878 128
Green Bay, Bryher	1	SV 8795 1457
Hillside Farm, Bryher	2	
Lawrence Brow, St Martin's	2	SV 9226 1576
Lunnon Farm, St Mary's	2	
Old Man, Tean	1	SV 9043 1627
Par Beach, St Martin's	4	SV 92 15
Poynter's Garden, St Mary's	5	SV 9014 1047
Porth Cressa East, St Mary's	1	
Parson's Field, St Mary's	11	SV 9019 1051
Toll's Porth, St Mary's	3	SV 9085 1235

APPENDIX J: CLIFF CASTLES

Site	NGR
Giants Castle, Salakee Down, St Mary's	SV 9245 1006
Shipman Head, Bryher	SV 8760 1604

APPENDIX K: MUSEUM ARTEFACT DATABASE

The British Museum

Accession number	Provenance	Brief description
1926-11-12-40	Barrow A, Normandy Down, St Mary's	Fragment, plain, dark brown, piece of foot.
1926-11-12-41	Barrow A, Normandy Down, St Mary's	Fragment, Lighter brown, Plain, flat rim, groove.
1926-11-12-42	Barrow A, Normandy Down, St Mary's	Fragment, thick, dark brown, piece of foot.
1926-11-12-43	Barrow A, Normandy Down, St Mary's	Fragment, brown, plain, rim with flat top.
1926-11-12-44	Barrow A, Normandy Down, St Mary's	Fragment, dark brown, gritty, large 2 lobed boss.
1926-11-12-1	Samson	End-scraper, broken and restored, fawn with crystalline Incrustation at one side.
1926-11-12-2	Samson	Flake, thin dark fawn, marked bulb, crust at edge.
1926-11-12-3	Great Tomb, Porth Hellick Down	Fragment of vessel, 2 pieces restored, dark brown with blackened exterior, boss, vertical zig-zags on shoulder.
1926-11-12-4	Great Tomb, Porth Hellick Down	Fragment, dark, close zig-zag string ornament.
1926-11-12-5	Great Tomb, Porth Hellick Down	Fragment, 2 pieces joined, dark, chevrons of string ornament.
1926-11-12-6	Great Tomb, Porth Hellick Down	Fragment, small, dark, rim, horizontal chevron ornament,
1926-11-12-7	Great Tomb, Porth Hellick Down	Fragment, 2 pieces joined, horizontal tubular lug.
1926-11-12-8	Great Tomb, Porth Hellick Down	Fragment, dark, minute, herring bone ornamentation.
1926-11-12-9	Great Tomb, Porth Hellick Down	Pumice stone pendant, uniperfect, dark brown, victor-glass hole.
1926-11-12-10	Obadiah's Barrow, Gugh	Copper fragment of ? an awl, square in section, corroded.
1926-11-12-11	Obadiah's Barrow, Gugh	Bone point, 2 pieces joined, tip missing.
1926-11-12-12	Obadiah's Barrow, Gugh	Bone point, exterior partly scaled, hollow.
1926-11-12-13	Obidaih's Barrow, Gugh	Bone splinter, pointed, hollow
1926-11-12-14	Obadaih's Barrow, Gugh	Pottery fragment, reddish brown, darkened rim, roulette ornament.
1926-11-12-15	Obadiah's Barrow, Gugh	Pottery fragment, side of vase, finger grooves, blackened.

APPENDIX K: MUSEUM ARTEFACT DATABASE

Accession number	Provenance	Brief description
1926-11-12-16	Obadiah's Barrow, Gugh	Pottery fragment, dark, perforated handle, grooves above.
1926-11-12-17	Obadiah's Barrow, Gugh	Pottery fragment, broad thick handle, horizontally perforated.
1926-11-12-18	Obadiah's Barrow, Gugh	Pottery fragment, dark, boss with tiny horizontal perforations
1926-11-12-19	Obadiah's Barrow, Gugh	Pottery fragment, dark, heavy lug, broken.
1926-11-12-20	Obadiah's Barrow, Gugh	Pottery fragment, dark, boss with tiny horizontal perforations
1926-11-12-21	Obadiah's Barrow, Gugh	Pottery fragment, 2 pieces joined, rim, low boss perforated.
1926-11-12-22	Obadiah's Barrow Gugh	Pottery fragment , light brown, rim, applied boss,
1926-11-12-23	Obadiah's Barrow, Gugh	Pottery fragment, thick, light brown, darkened, hollow
1926-11-12-24	Obadiah's Barrow, Gugh	Pottery fragment, gritty, fawn, irregular surface, plain
1926-11-12-25	Obadiah's Barrow, Gugh	Pottery fragment, 6 restored, dark, slant tool marks
1926-11-12-26	Obadiah's Barrow, Gugh	Pottery fragment, 4 restored, foot of vase, rough exterior
1926-11-12-27	Barrow A, Normandy Down	Pottery fragment, dark brown, plain rim, groove ornament
1926-11-12-28	Barrow A, Normandy Down	Pottery fragment, dark brown, faint ornament of dots in rows
1926-11-12-29	Barrow A, Normandy Down	Pottery fragment, 2 pieces, dark brown, dots in rows,
1926-11-12-30	Barrow A, Normandy Down	Pottery fragment, dark brown, ornament very faint
1926-11-12-31	Barrow A, Normandy Down	Pottery fragment, small, dark, grooved.
1926-11-12-32	Barrow A, Normandy Down	Pottery fragment, dark brown, surface partly corroded, grooved.
1926-11-12-33	Barrow A, Normandy Down	Pottery fragment, dark, grooved.
1926-11-12-34	Barrow A, Normandy Down	Pottery fragment, dark grooved.
1926-11-12-35	Barrow A, Normandy Down	Pottery fragment, dark, finger-tip impressions
1926-11-12-36	Barrow A, Normandy Down	Pottery fragment, plain rim, dark

APPENDIX K: MUSEUM ARTEFACT DATABASE

Accession number	Provenance	Brief description
1926-11-12-37	Barrow A, Normandy Down	Pottery fragment, plain rim with flat top.
1926-11-12-38	Barrow A, Normandy Down	Pottery fragment, rim, thick, flat top, plain.
1926-11-12-39	Barrow A, Normandy Down	Pottery fragment, rim, flat top
1924-6-14	Samson	Flint arrow head, pale yellow, barbed and tanged, one part now forming a right angle
1928-6-4-1	Great Tomb, Porth Hellick Down	Pottery fragment, dark, hand made, thin, gritty, rough, upper portion covered with continuous rows of chevrons in string impressions, broken lug on shoulder with horizontal perforations
1928-6-4-2	Great Tomb, Porth Hellick Down	Pottery fragment, dark, handmade, gritty, two rows of chevrons bounded by horizontal lines, all executed in twisted string impressions
1928-11-7-1	Halangy Porth, St Mary's	Pottery fragment, light brown, gritty and micaeceous, heavy curved mouldings.
1928-11-7-2	Halangy Porth, St Mary's	Pottery fragment, triangular plain, dark brown outer surface,, gritty, micaeceous
1928-11-7-3	Halangy Porth, St Mary's	Pottery fragment, base, plain, dark brown, thick, micaceous ware
1928-11-7-4	Halangy Porth, St Mary's	Pottery fragment, small, dark, thin, micaceous ware, ornament
1928-11-7-5	Halangy Porth, St Mary's	Pottery fragment, dark, micaceous, stamped horse-shoe impressions in bands.
1928-11-7-6	Halangy Porth, St Mary's	Pottery fragment, small, light brown, micaceous, deep irregular impressions
1946-4-9-1	? (Pendrathen cliff)	Pottery urn, Brown to black, coarse hand made, fabric 1/2 " thick. Simple flower pot shape with pair of small lugs or bosses on either side 3" below rim, almost complete with several repaired fractures, Given by Miss D. Jackson (excavated from cliff-faced site in 1928 (See IOS No.1319)

APPENDIX K: MUSEUM ARTEFACT DATABASE

Isles of Scilly Museum

Accession number	Provenance	Brief details
1-291	Nornour	Bronze brooches
291-327	Nornour	Coins
327-340	Nornour	Various
341	Nornour	Complete Iron Age pot from House 1
342-350	Nornour	Miniature pot recovered from hearth in House 1
351-358	Nornour	Miniature pot recovered from hearth in House 1
541	St Helen's	Box of pottery from hut 1, St Helen's
541-571	St Helen's	Assorted material
572	Halangy Porth	Large piece of urn (lug and rim)
572A	Halangy Porth	Large pottery fragment
573	Halangy Porth	Large pottery fragment (rim and lug) decorated with incised lines and grain impressions
574-581	Halangy Porth	Assorted material (Pottery, stone and flint)
584	Nornour	Box of pottery, flints and bone fragments
585-642	Tean	Assorted excavation material
643	Samson	Pottery and flints
644	St Helen's	Hammerstone
645	Klondyke, St Mary's	Flint knife from Klondyke
646	Klondyke, St Mary's	Flint arrowhead
647	Klondyke, St Mary's	Flint spokeshave
648	Klondyke, St Mary's	Flint scraper
649	Klondyke, St Mary's	Flint
684	Various	Forty two thumb-nail scrapers
685	Bryher	Large flint adze
686	Unknown	Flints
696	Samson flats	Amphora rim
697	Unknown	End scraper
736	Various	Six sheets of plans and sections of BA entrance graves and cists. Ashbee 1949-
738	St Martins	Quartz block ?anvil excavated on St Martins by Mrs Minet-Smith
739	St Martins	Box of miscellaneous pottery and flints excavated from St Martins by Mrs Minnet-Smith

APPENDIX K: MUSEUM ARTEFACT DATABASE

Accession number	Provenance	Brief description
752	Unknown	Rough-out, flint hand axe 90 x 60 mm
826-827	Klondyke, St Mary's	Flints
828	Klondyke, St Mary's	Flint blade
829	Klondyke, St Mary's	Flint knife
830	Klondyke, St Mary's	Flint
831	Klondyke, St Mary's	Flint blade
832	Klondyke, St Mary's	Flint
833	Klondyke, St Mary's	Arrow head
834	Klondyke, St Mary's	Arrow Head
835	Klondyke, St Mary's	Arrow head
836	Klondyke, St Mary's	Arrow head
387	Klondyke, St Mary's	Three photographs of Bronze Age cist at Klondyke
838	Unknown	Granite mortar 270 x167 mm
847	Garrison, St Mary's	Flints
876-883	Nornour	Saddle quern and muller, Bone pin, and three minature pots
882	Knackyboy Carn, St Martin's	Pottery
883	Knackyboy Carn, St Martin's	Pottery
904	Old Town, St Mary's	Two pottery fragments, ashes and letter.
905-907	Content Farm, St Mary's	Flints from Content
908	Nornour	Whetstone
909	Bough, Tresco	Worked flint and one bead
910	Midden A, Annett	Pottery and flints found by P.Z. McKenzie
911	Midden B, Annett	Pottery, flint and worked bone
912-914	Nornour	Bone
915	St Agnes	Bone (wild boar)
917	Northwethel	Bone
918	Annett	Bone (vertebrae disk of whale)
933	Nornour	Large holed stone, (anchor)
934	Nornour	Large holed stone (large hole)
935	Nornour	Holed stone (small hole)
936	Halangy	Cup-marked stone
937	Unknown	Piece of the handle of a Greek vase
944	Borough Farm, Tresco	Barbed flint arrowhead
946-1019	Unknown	Hammerstones
946	Porthloo, St Mary,s	Bone (whale rib)
946-1019	Unknown	Worked bone
1019	Unknown	Half a holed stone

APPENDIX K: MUSEUM ARTEFACT DATABASE

Accession number	Provenance	Brief description
1021	Unknown	Holed rubbing stone
1023	Unknown	Half a holed stone
1055-1077	Nornour	Assorted items (inc. coins, rings and brooches)
1078	Obadiah's Barrow, Gugh	Funeral urn and ashes
1079	Unknown	Stone axe
1080	Halangy Porth	Pottery (Gibson collection R/W579)
1088	Nornour	Bone (humerous of young seal)
1113	Nornour	Assorted sherds from Nornour (box 527/533)
1116	Nornour	Bones from midden
1120	Porthcressa East, St Mary's	Pottery
1121	Northwethel	Miscellaneous pottery
1186	Normandy	Half Axe hammer
1192	Unknown	Bag of flints
1193	Unknown	Bag of flint cores
1194	Unknown	Bag of flint spearheads
1195	Unknown	Bag of flint scrapers
1196	Unknown	Bag of flint points
1197	Unknown	Bag of flint blades
1197-1223	Unknown	Flints
1202	Unknown	Cupmarked and holed stones
1204	Unknown	Stone bowl
1210	Halangy	Flint points
1211	Unknown	Microliths
1215-1223	Unknown	Arrowheads
3245	Unknown	Worked flint tool
3050	Garden of cottage next to St Mary's Hospital	Small quern and flint.
1241	Unknown	Burial urn with mat impression on base
1297	Unknown	Pottery
1299	Unknown	Box of funerary urn lugs (Gibson collection)
1298	Unknown	Box of funerary urn fragments (Gibson collection)
1300	Unknown	Bag of funery urn rims, (Gibson collection)
1301	Unknown	Bag of funerary urn fragments (Gibson collection)
1302	Halangy Porth	Bag of funerary urn fragments (Gibson collection)

APPENDIX K: MUSEUM ARTEFACT DATABASE

Accession number	Provenance	Brief description
1303	Unknown	Bag of burial urn contents and pottery
1304	Little Arthur, Eastern Isles	Bag of pottery from grave on Little Arthur
1305	Unknown	Bag of ancient grave contents (bone and pottery)
1306	Unknown	Bag of Iron age pottery
1308	Unknown	Granite fishing weight
1309	Unknown	Granite fishing weight
1310	Unknown	Large holed stone
1311	Unknown	Wedge shaped holed stone
1312	Unknown	Half cup marked round stone
1314	Unknown	Half of a mace head
1315	Bryher	Adze type battle axe.
1318	Tean	Oyster shell from Tean Midden
1319	Pendrathen Cliff, St Mary's	Photograph of BA pot found in 1930 by Miss Jackson. Pot in British Museum (BM-No. 1946-4-9)
1422	Halangy	Whet stone (Halangy 117)
1423	Halangy	Whetstone (Halangy 71)
1424	Halangy	Whetstone (Halangy 98)
1425	Halangy	Quartz hammerstone (Halangy 17)
1426	Halangy	Cup marked stone
1434	Nornour	Original site plans from Nornour
1487	North Hill, Samson	Two flints and two pottery fragments
1512	Little Arthur	Flint
1513	Tean	Sherd of cordoned jar from large midden
1514	Arthur	Bag of potttery
1534	Garden of the Pilot's Retreat, St Mary's	Agate bead
1541	Buzza Hill, St Mary's	Large granite bowl used for salting fish
1542	Porth Mellon, St Mary's	Fish bone needle
1552	Tean	Flints found (mostly unworked but some bear traces of heavy abrasion)
1558	Unknown	Two holed flints (once property of J.Treneary)
1559	Northwethel	Pottery and stone
1571	St Mary's	Bronze socketed axehead
1583	Unknown	Three connelian beads

APPENDIX K: MUSEUM ARTEFACT DATABASE

Accession number	Provenance	Brief description
1585	East side of St Martin's	Striated flint
1590	Newford Island, St Mary's	Socketed stone
1597	Bar Point, St Mary's,	Arrowhead
1599	The Brow Bryher	Twelve flints
1604	Samson	Assorted finds from Samson (Pottery, flint and stone)
1605	Mount Todden, St Mary's	Four worked flints
1623	Newford Island, St Mary's	Double ended worked flint
1628	Nornour	Holed stone
1656	Samson	Bag of flints
1673	Tean	Pottery from midden
1675	Porth Killier, St Agnes	Pottery
1676	Unknown	Pottery, flint, stone and bone Various
1677	East Porth, Samson	Miscellaneous collection from a burial at East Porth, Samson
1678	Tean	Four flints from Tean
1679	Tean	Twenty one flints from midden
1680	Tean	Ten flints and four bones from midden
1681	Old Quay, St Martin's	Twelve flints from cliff face (opposite Pigs Ledge)
1682	Old Quay, St Martin's	Twenty four flints
1683	Pernagie, St Martin's	Two flints
1684	Plumb Island, St Martin's	Eight flints from cliff-face
1685	Great Bay, St Martin's	Eighteen flints from house
1686	Great Bay, St Martin's	Twelve flints from Great Bay
1687	Old Quay, St Martin's	Two flints
1688	Old Quay, St Martin's	Twenty eight flints
1689	Old Quay, St Martin's	Seven flints and one tooth (horse or cow)

APPENDIX K: MUSEUM ARTEFACT DATABASE

Accession number	Provenance	Brief description
1690	Porth Hellick Bay, St Mary's	Small piece of stone and two flints (midway along beach below mean high tide)
1694	Nornour	Petit tranchet' flint tool
1711	West Porth, Tean	Seventeen worked flints and flakes
1712	White Island, St Martin's	Three flints (one domed)
1713	Heathy Head, Bryher	Small collection of flints, flakes and chips, some coloured by fire (Found in the filling of a field wall).
1714	Unknown	Two struck flints
1719	Porth Minnick, St Mary's	Large flint with worked edge
1722	Nornour	Pottery sherd from Nornour excavations
1755	South Hill, Samson	Fifteen sherds of pottery (found on Samson South Hill, north-west corner of the deer park).
1758	The Cove, St Martin's	Large flint hammerstone
1759	Porth Hellick, St Mary's	Spindle worl
1760	Porthcressa, St Mary's	Flint scraper
1773	Bants Carn, St Mary's	Flint
1774	Porth Killier, St Agnes	Two pieces of pottery and two flints
1766	Blockhouse area, Tresco	Stone mace head
1775	West end of Tean	Two worked flints
1777	Garrison, St Mary's	Small dolls head agate bead
1778	Cliff-face at Old Quay, St Martin's	Five flints and four pottery sherds
1783	Cliff-face at Little Bay, St Martin's	Two sherds of pottery
1789	Beach onTresco	Five flints
1791	Bryher	Arrowhead
1794	Beach on the east side of Samson Hill, Bryher	Sixteen worked flints
1799	Samson, St Martin's	Collection of stones and flints (14 items)

APPENDIX K: MUSEUM ARTEFACT DATABASE

Accession number	Provenance	Brief description
1821	Porth Mellon, St Mary's	Patinated long scraper flint
1824	Midden on Annet (SV 8632 0835)	Twenty six sherds of pottery, two flints and a firecracked pebble.
1826	Porth Killier, St Agnes	Piece of pottery from midden.
1829	St Agnes	Agate bead found on the foreshore of St Agnes near bar to Gugh
1831	Newford Farm, St Mary's	Three flints
1844	Wedged in door post of house at Nornour	Worked flint
1845	Parting Carn Farm, St Mary's	Three pieces of pottery
1864-1872	Unknown	Romano-British pottery
1873	St Martin's	Round stone rubber
1874	Unknown	Grooved stone (net sinker)
1886	Unknown	Small flint
1956	St Agnes and Bryher	Nine pieces of pottery and eleven flints
2012	St Martin's	Thirty-six pottery sherds
2013	English Island Carn, St Martin's	Hammer-stone
2014	Unknown	Slate spindle whorl
2015	Unknown	Two amber beads, one glass bead and small iron object
2017	Tean	One box of sherds
2018	Unknown	Small lump of flint
2034	Little Bay, St Martin's	Book of copies of archival drawings from excavations at Little Bay (Bookroom no.13)
2033	Little Bay	Report on the excavation of Little Bay, vol 1 and 2. (Bookroom 14)
2242	Samson	Flint flake
2254	Nornour	Set of microfiche from excavations at Nornour (1962-1966 and 1969-1973)
2313-2141	Unknown	Assorted material (flint, stone and pottery)
2342	Normandy Farm, St Martin's	Five pieces of stone mace head
2348	Halangy	Two flints

APPENDIX L: GLOSSARY

Carns: Cornish term for a tor.

Chart Datum (CD): is the reference levelabove which heights of tides are predicted, and below which charted depths are measured. Chart Datum on Scilly is 2.91m below Ordnance Datum (MSL).

Clitter: The boulder and stone spreads found down slope of upland tors: the result of large scale periglacial frost-shattering.

Fetch: The distance wind or waves can travel without obstruction

High Astronomical Tide (HAT): The highest sea-level predicted under average meterological conditions. HAT on Scilly is 5.29m above MSL

High/Low Neaps Tide HNT/LNT): Occur roughly every 16 days, near the Moon's first and last quarters, when the tide-raising forces of the Sun and Moon are at a minimum.

High/Low Springs Tide (HST/LST): Occur roughly every 16 days, near to Full and New Moon, when the tide-raising forces of the Sun and Moon are at a maximum.

Low Astronomical Tide (LAT): The lowest sea-level predicted under average meterological conditions. LAT on Scilly is 2.91m below MSL.

Mean High Tide and Mean Low Tide (Springs and Neaps): Mean High Springs Tide (MHST) and Mean High Neaps Tide (MHNT) are the averages of predicted high water heights of Spring or Neap Tide over a period of 18.6 years. Similarly, Mean Low Spring Tide (MLST) and Mean Low Neap Tide (MLNT) are the average of low water heights for Spring and Neap tides respectively.

APPENDIX L: GLOSSARY

Mean Sea Level (MSL): MSL is the average of the heights Mean High Spring Tide (MHST), Mean High Neap Tide (MNHT), Mean Low Spring Tide (MNLT) and Mean Low Neap Tide MLNT).

Ordnance Datum (OD): Present day Mean Sea Level calculated from Newlyn, Cornwall and used as the official basis for height calculations on British maps.

Tidal Range: The tidal range is the difference between the heights of suggestive high and low waters. Spring range is the difference between MHST and MLST, and Neap range is the difference between MHNT and MLNT.
Tor: Rock stack exposed by the weathering of surrounding rock and deposits

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THE PREHISTORIC ISLAND LANDSCAPES OF SCILLY

VOLUME II

Gary Robinson

Dissertation in fulfilment of the requirements for the degree of Doctor of Philosophy of the University of London

UNIVERSITY COLLEGE LONDON
INSTITUTE OF ARCHAEOLOGY

Figures

A note on the figures reproduced in this thesis

The author, unless stated otherwise, has drawn all figures. Plans of monuments and houses have been drawn in the field to a scale of 1:50; artefacts to a scale of 1:1 or 1:2. Topographical data has been reproduced from Ordnance Survey data and manipulated using Macro Media Freehand 10 software. Contours, unless stated otherwise, are reproduced at 10m intervals. Marine contours and tidal elevations have been reproduced in accordance with British Admiralty guidelines (British Admiralty 1998) and recalculated to Ordnance

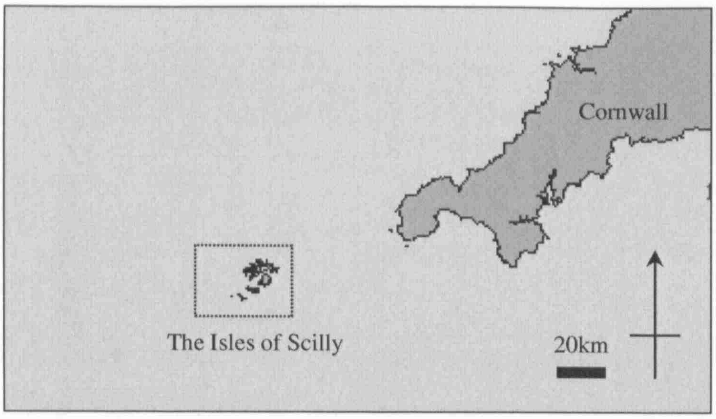


Fig. 1.1 The Isles of Scilly are located 48km south west of Lands End, Cornwall (An enlargement of the boxed area is shown below in Fig. 1.2)

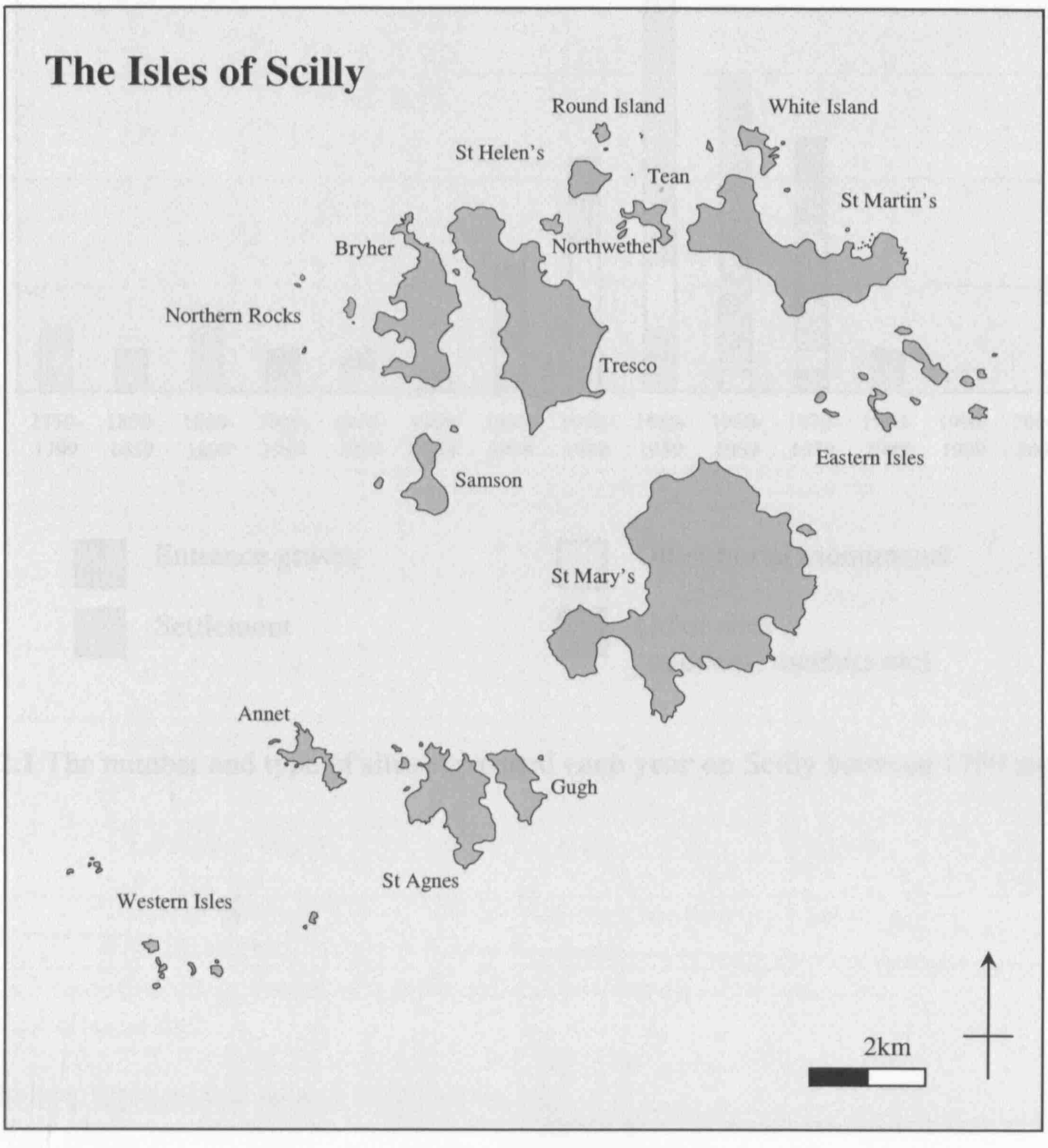


Fig. 1.2 A map of the Isles of Scilly showing the principal islands discussed in the text

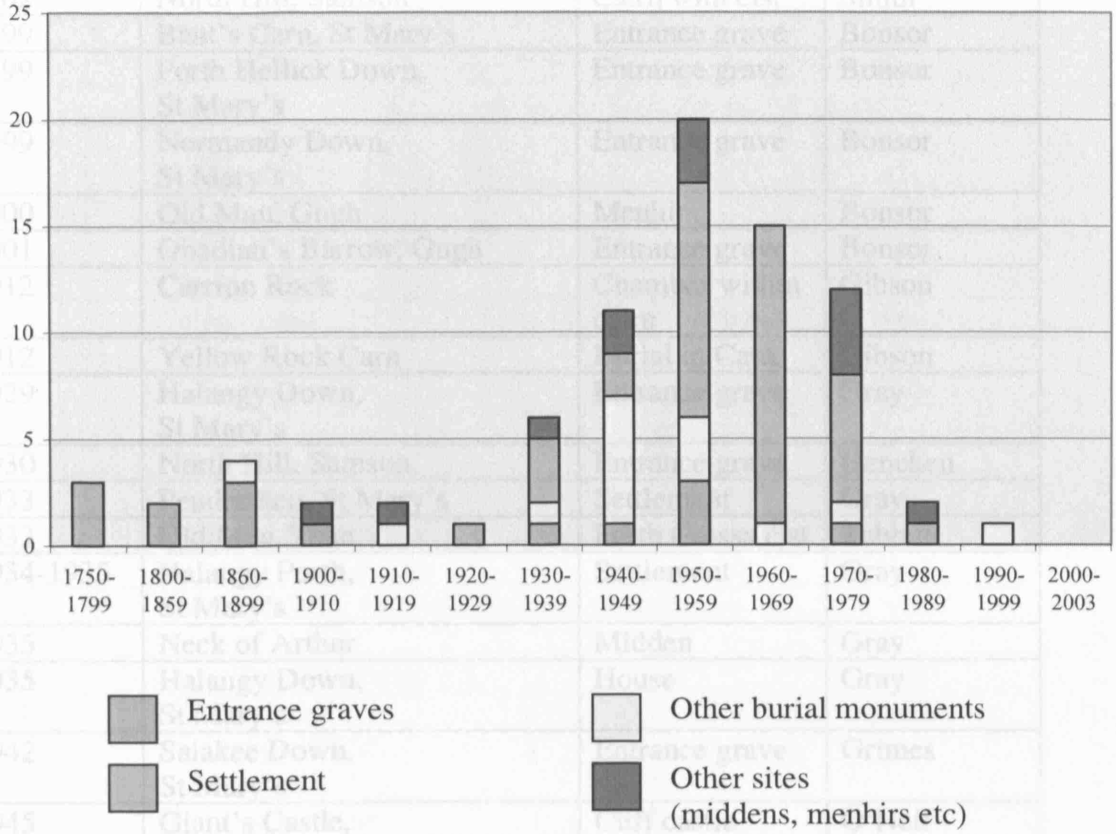


Fig. 2.1 The number and type of sites excavated **each year** on Scilly between 1750 and 2003

Date of excavation	Site name	Site type	Excavator
1756*	Buzza Hill, St Mary's	Entrance grave	Borlase
1756*	Buzza Hill, St Mary's	Entrance grave	Borlase
1796*	Kittern Hill, Gugh	Entrance grave	Troutbeck
1822*	Peter's Barrow, Porth Hellick Down, St Mary's	Entrance grave	Woodley
1822*	Porth Hellick Down, St Mary's	Entrance grave	Woodley
1862	North Hill, Samson	Cairn with cist	Smith
1899	Bant's Carn, St Mary's	Entrance grave	Bonsor
1899	Porth Hellick Down, St Mary's	Entrance grave	Bonsor
1899	Normandy Down, St Mary's	Entrance grave	Bonsor
1900	Old Man, Gugh	Menhir	Bonsor
1901	Obadiah's Barrow, Gugh	Entrance grave	Bonsor
1912	Carrion Rock	Chamber within cairn	Gibson
1912	Yellow Rock Carn	Burial in Carn	Gibson
1929	Halangy Down, St Mary's	Entrance grave	Gray
1930	North Hill, Samson	Entrance grave	Hencken
1933	Pendrathen, St Mary's	Settlement	Gray
1933	Old Man, Tean	Porth Cressa cist	Tebbutt
1934-1935	Halangy Porth, St Mary's	Settlement	Gray
1935	Neck of Arthur	Midden	Gray
1935	Halangy Down, St Mary's	House	Gray
1942	Salakee Down, St Mary's	Entrance grave	Grimes
1945	Giant's Castle, St Mary's	Cliff castle	O'Neil
1945	Barnacle Rock	Chamber between natural boulders	Lewis
1947	Lawrence Brow, St Marrtin's	Cist	Lewis
1948	Pernargie Carn, St Martin's	Chamber in cairn	Lewis

Fig. 2.2 Excavations of prehistoric sites on Scilly between 1750 and 2003 (Continued overleaf)

(* Denotes approximate date of excavation).

Date of excavation	Site name	Site type	Excavator
1948	Knackyboy Cairn, St Martin's	Entrance grave	O'Neil
1948	White Island, St Martin's	Bank and ditch	O'Neil
	English Island Cairn, St Martin's	House	O'Neil
1948-1949	Par Beach, St Martin's	House	O'Neil
1949	Par Beach, St Martin's	Cist	O'Neil
1949	Par Beach, St Martin's	Cist	O'Neil
1949-1950	Parson's Fields, St Mary's	Porth Cressa cist cemetery,	Ashbee
1950	Content Farm, St Mary's	Cist	Ashbee
1950	Lawrence Brow, St Martin's	House	O'Neil
1950	Par Beach, St Martin's	House	O'Neil
1950	May's Hill, St Martin's	House and midden	O'Neil
1950	Tinker's Hill, St Martin's	Entrance grave	O'Neil
1950	Halangy Down, St Mary's	Settlement	Ashbee
1951	Par Beach, St Martin's	House	O'Neil
1951	Little Arthur	House	O'Neil
1952	Perpitch, St Martin's	House	O'Neil
1952	Bay Hill, St Martin's	Field system	O'Neil
1952	Flat Rock Hill, St Martin's	Chamber in cairn	O'Neil
1952	Great Bay, St Martin's	House	O'Neil
1952	Hillbenigates	Cairn with cist	O'Neil
1952	Parsonage Field, St Martin's	Hut circle and midden	O'Neil
1952	East Porth, Tean	Midden	O'Neil
1952-1953	Little Bay, St Martin's	House	O'Neil
1953	Middle Arthur	Entrance grave	O'Neil
1953	Burnt Hill	Cliff castle	O'Neil
1960	Poynter's Garden, St Mary's	Porth Cressa cist cemetery and midden	Dudley
1960	Rosehill, St Agnes	Courtyard house	Dudley
1962-1966	Nornour	Settlement	Dudley
1964-1970	Halangy Down, St Mary's	Settlement	Ashbee

Fig. 2.2 (cont.) Excavations of prehistoric on Scilly between 1750 and 2002 (continued overleaf)

Date of excavation	Site name	Site type	Excavator
1965	Halangy Porth, St Mary's	Cist	Mackenzie
1969-1973	Nornour	Settlement	Butcher
1970	Bant's Carn, St Mary's	Entrance grave	Ashbee
1970-1971	East Porth, Samson	Porth Cressa cist and pits	Butcher, Neal
1974	Little Bay, St Martin's	Settlement	Butcher
1975-1976	Halangy Porth, St Mary's	House	Ashbee
1977	Bar Point, St Mary's	Field system	Ashbee
1977	Green Bay, Bryher	Cist	Thomas
1979-1980	Bar Point, St Mary's	Field system	Evans
1980	Little Bay, St Martin's	Settlement	Neal
1999	Samson Hill, Bryher	Porth Cressa	Cornwall Archaeological Unit

Fig. 2.2 (cont.) Excavations of prehistoric sites on Scilly between 1750 and 2002.

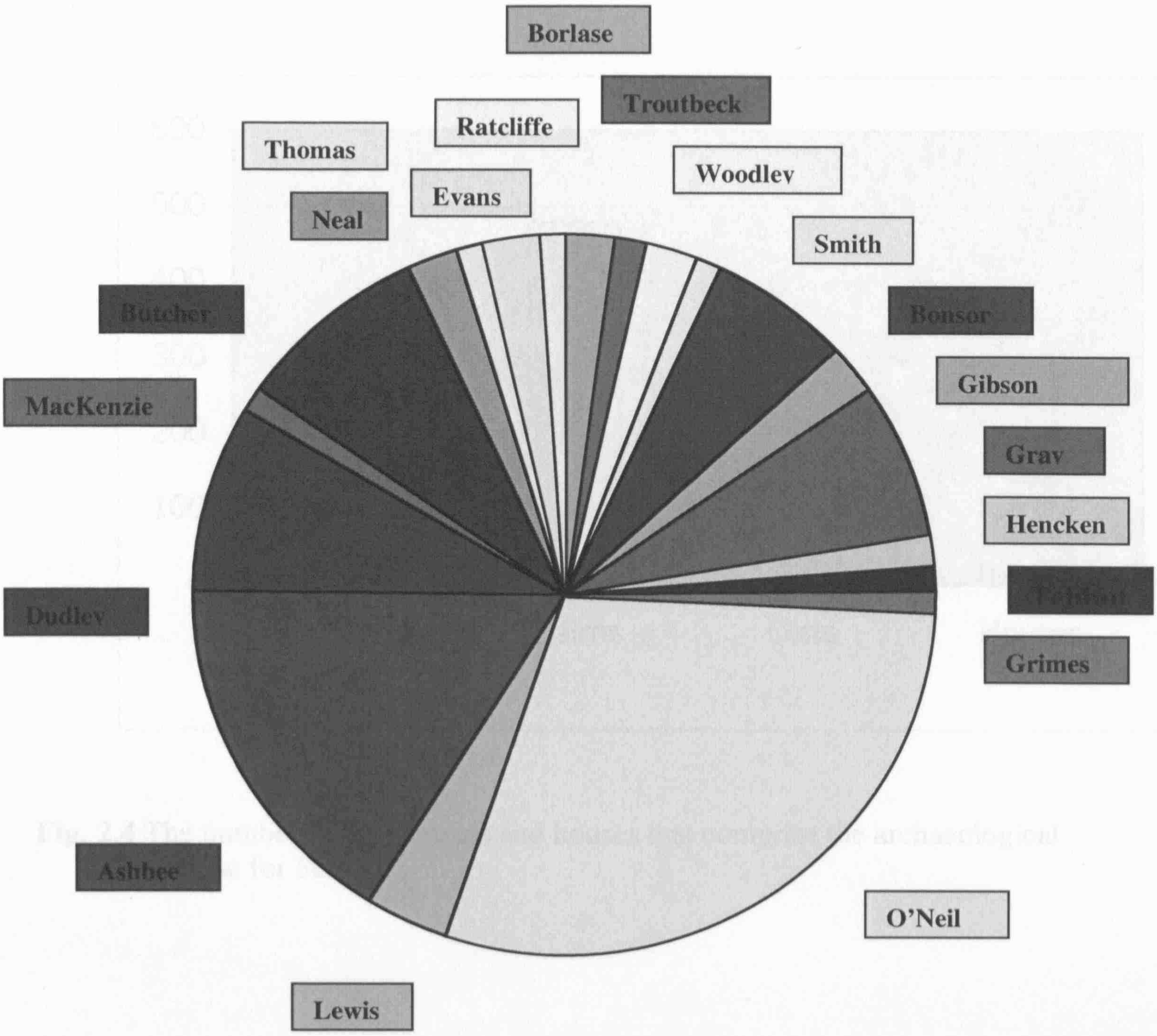


Fig. 2.3 The chart shows the number of excavations attributable to individual fieldworkers on Scilly expressed as a percentage of total seasons of excavation. It can be seen that only a small number of archaeologists, (principally O'Neil and Ashbee) have been responsible for the majority of excavations on the islands.

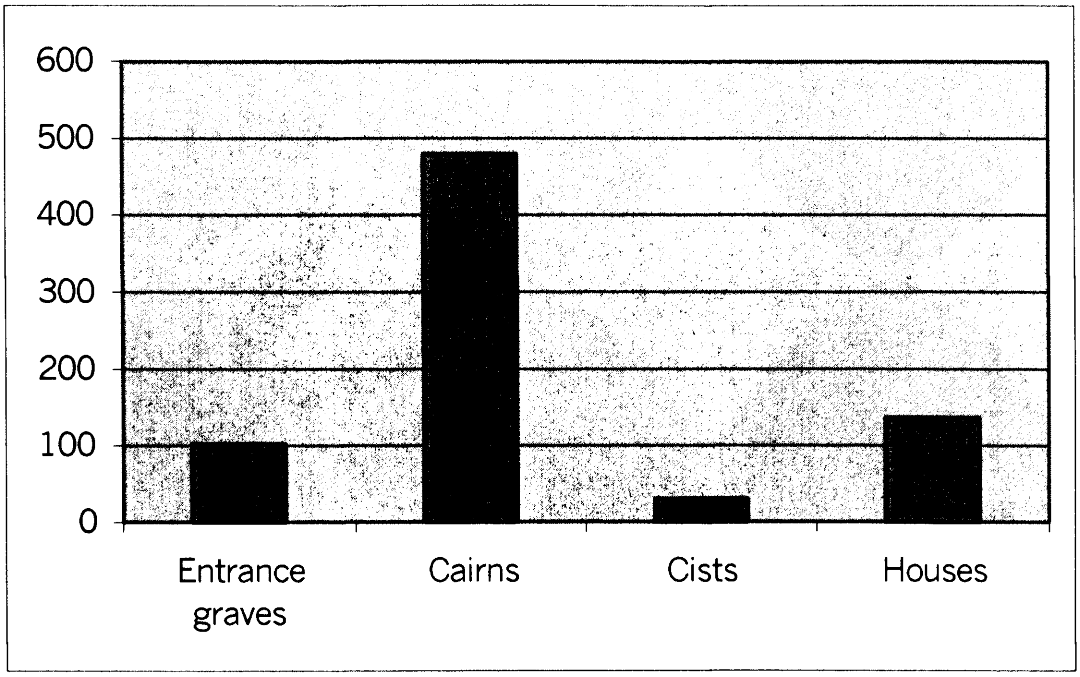


Fig. 2.4 The number of monuments and houses that comprise the archaeological database for Scilly

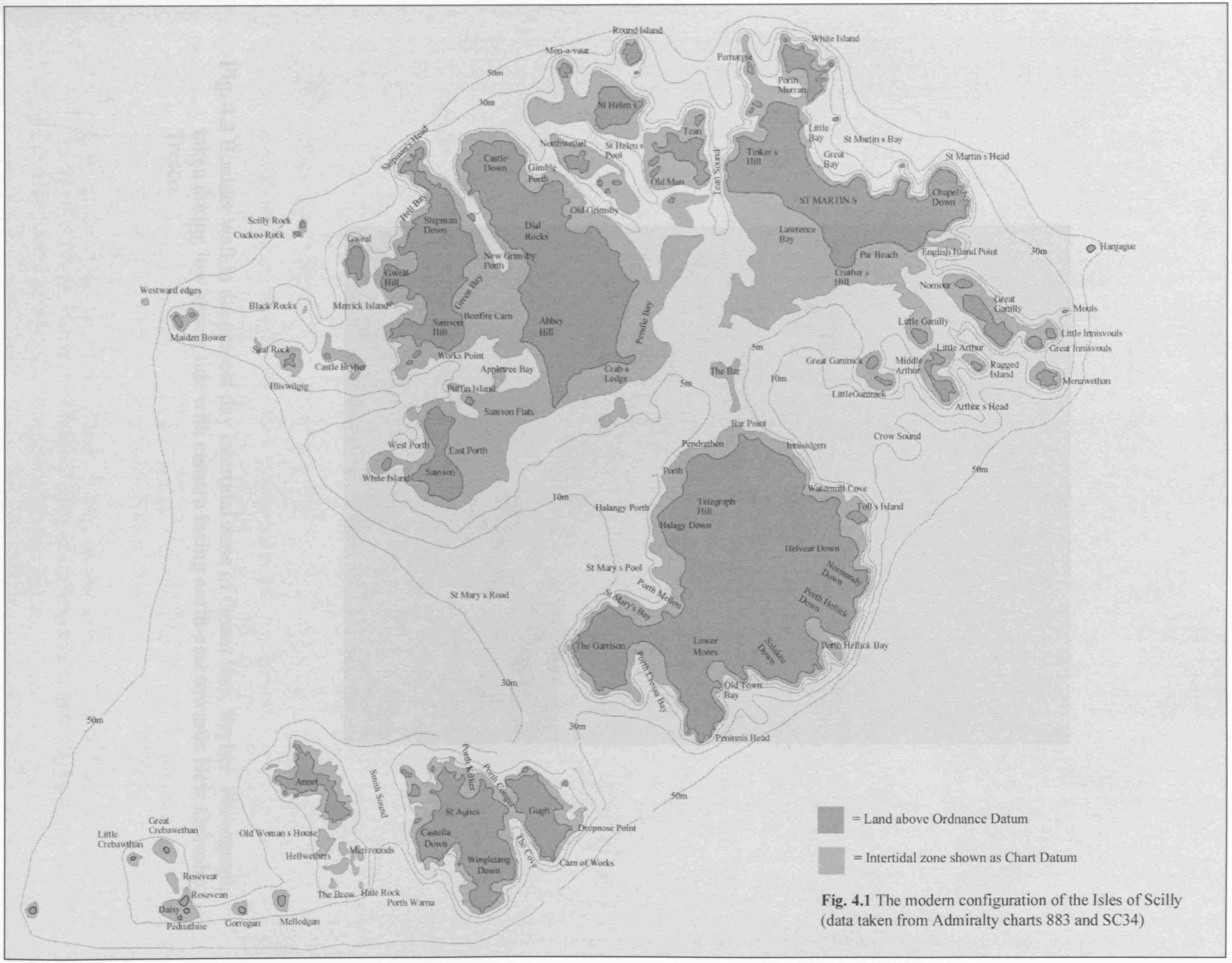


Fig. 4.1 The modern configuration of the Isles of Scilly (data taken from Admiralty charts 883 and SC34)

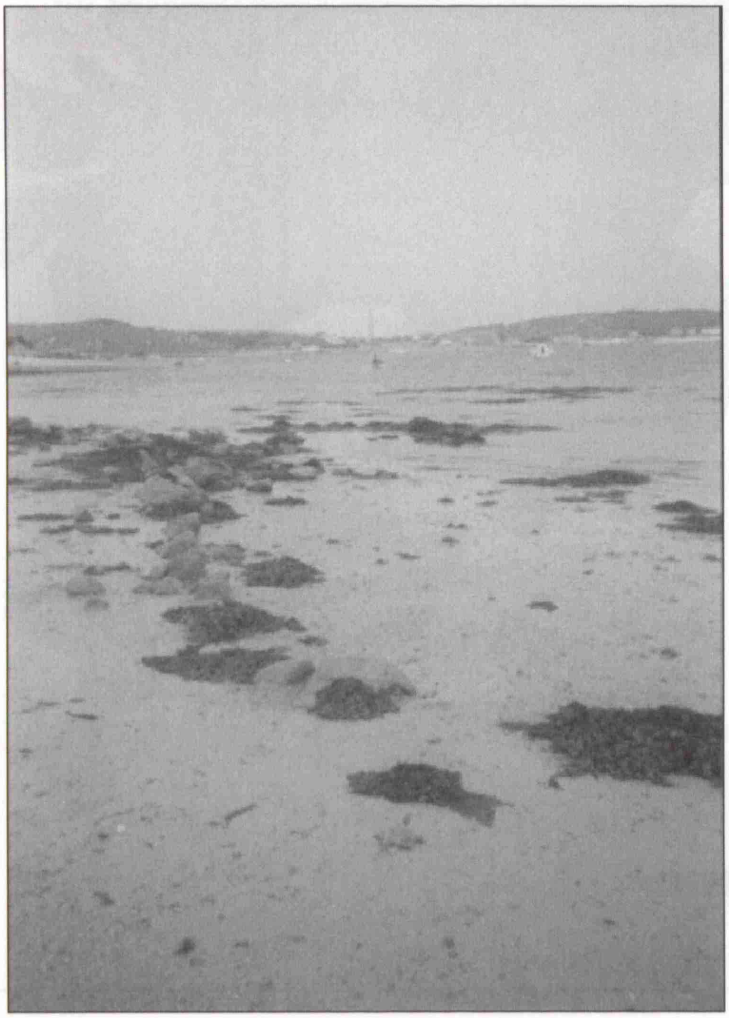
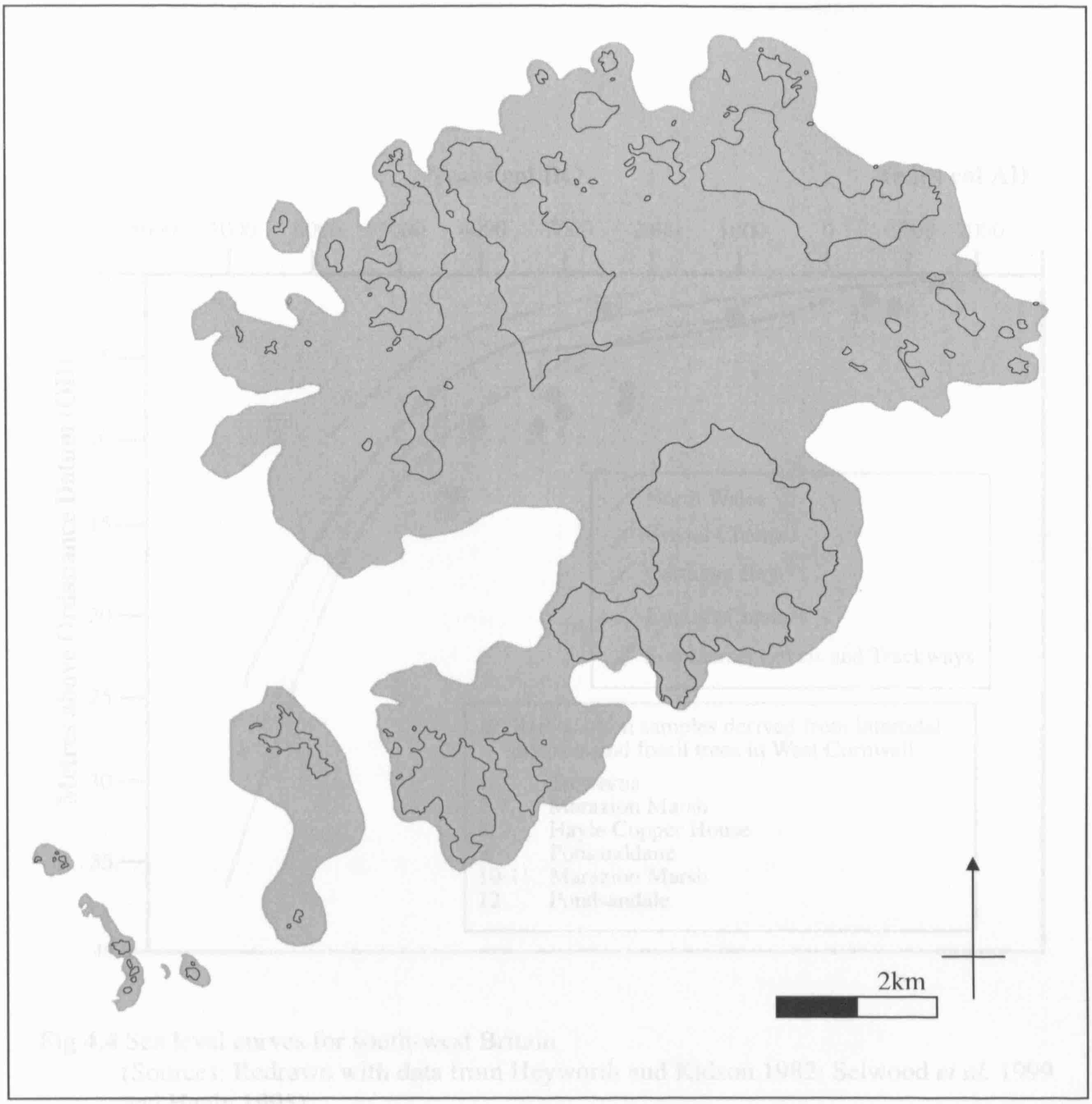


Fig. 4.2 Boulder wall in the present day intertidal zone of Green Bay, Bryher. Photograph taken during low spring tide with camera facing north-east towards New Grimsby, Tresco.



= Land above MSL

Black outline of islands represents their present day configuration
Blue outline is Thomas' prehistoric coastline for c.2000 calBC

Fig. 4.3 Map demonstrating how Thomas' model of prehistoric sea-level change would effect the configuration of Scilly (MSL has been set for *c.* 2000 cal BC).

N.B. An intertidal zone has not been shown on this map as Thomas' postulated coastline (MSL) is marked by a sharp drop in sea-level as shown in Fig 4.1. (Source: Redrawn from Thomas 1985, 72, fig. 24).

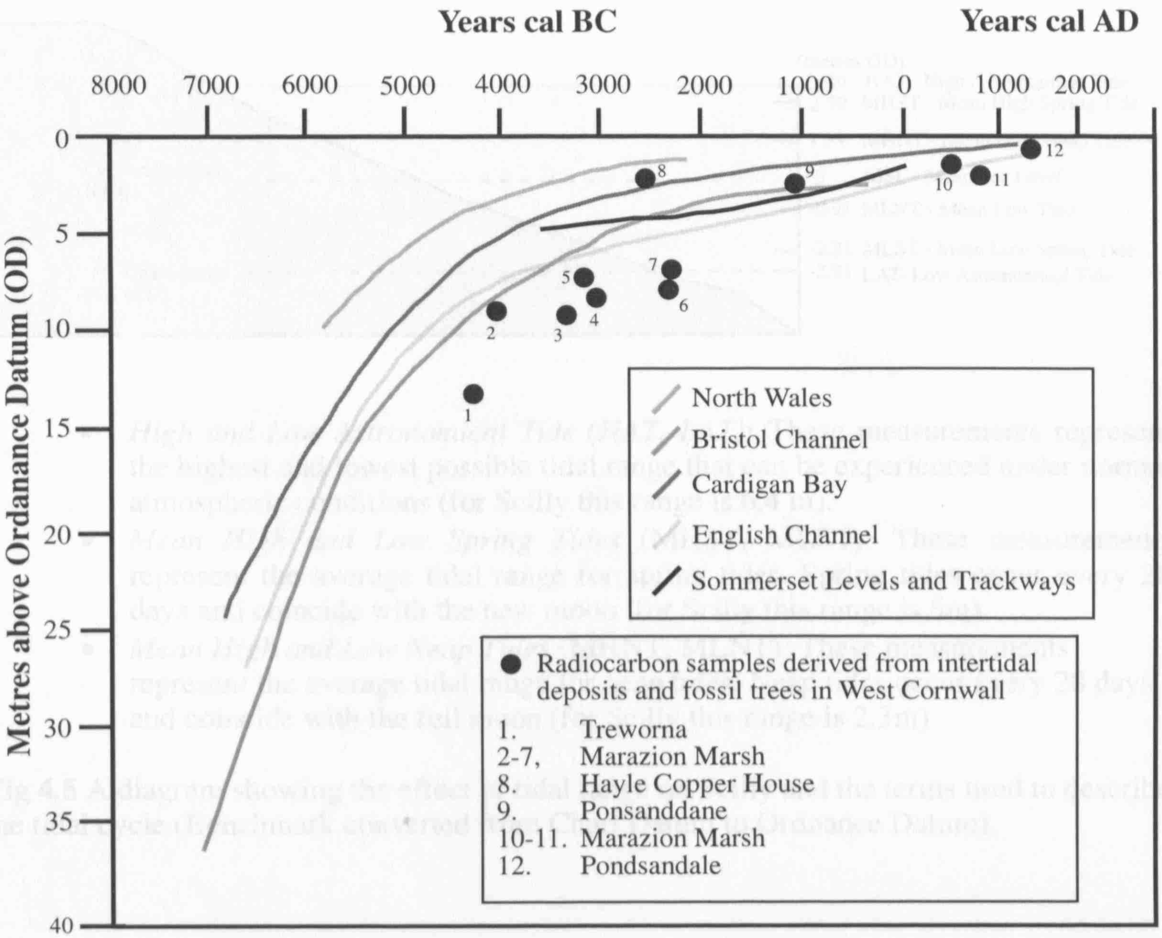
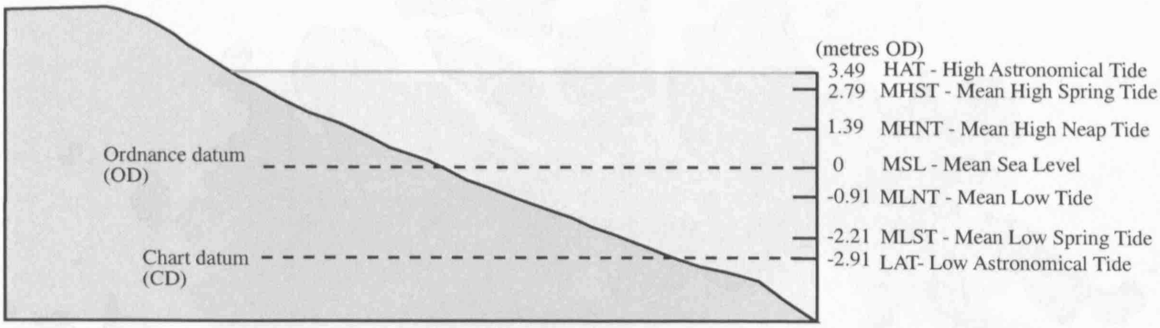


Fig 4.4 Sea level curves for south-west Britain (Sources: Redrawn with data from Heyworth and Kidson 1982; Selwood *et al.* 1999 and Healy 1995).

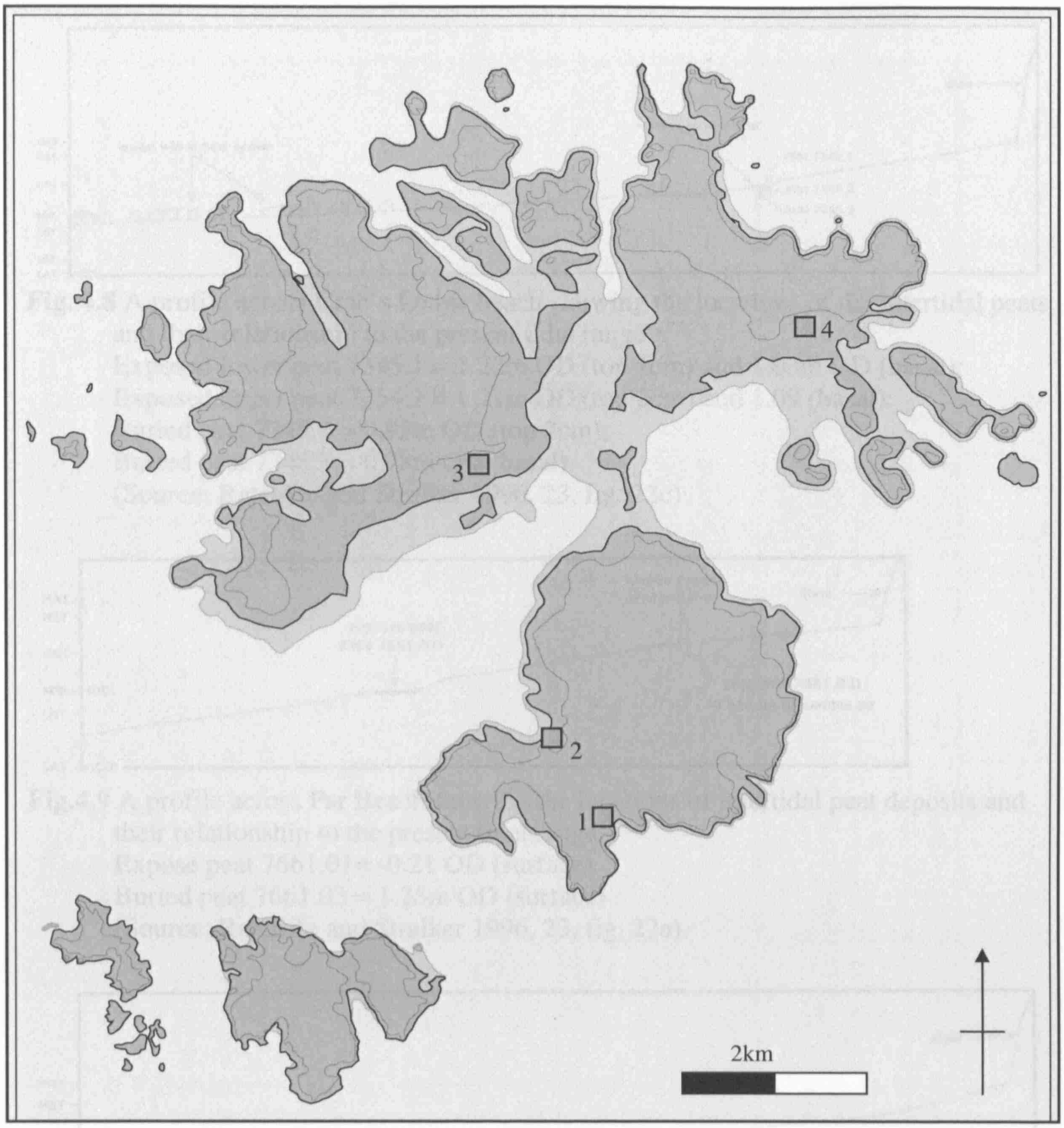


- *High and Low Astronomical Tide (HAT, LAT):* These measurements represent the highest and lowest possible tidal range that can be experienced under normal atmospheric conditions (for Scilly this range is 6.4 m).
- *Mean High and Low Spring Tides* (MHST, MLST): These measurements represent the average tidal range for spring tides. Spring tides occur every 28 days and coincide with the new moon (for Scilly this range is 5m)
- *Mean High and Low Neap Tides* (MHNT, MLNT): These measurements represent the average tidal range for neap tides. Neap tides occur every 28 days and coincide with the full moon (for Scilly this range is 2.3m)

Fig 4.5 A diagram showing the effect of tidal range on Scilly and the terms used to describe the tidal cycle (Benchmark converted from Chart Datum to Ordnance Datum).

Datum Point	MST Range (metres)	MNT Range (metres)
St Mary's, Scilly	5	2.3
Cape Cornwall	5.4	2.3
Newlyn	4.8	2.4
Penzance	4.8	2.4
Perraporth	5.2	2.7
Portleven	4.8	2.3
St Ives	6	2.5

Fig. 4.6 Table showing a comparison between tidal ranges for Scilly and West Cornwall.
MST=Mean spring tide
MNT=Mean neap tide
(Source of data: D'Oliveira *et al.* 2003)



Intertidal peat sample points
1.Crab's Ledge, Tresco
2. Par Beach, St Martin's
3. Porth Mellon, St Mary's

=Land over prehistoric MSL

= Prehistoric intertidal zone (Set to -2.91 MSL)

Fig. 4.7 Map showing the location of sampled modern intertidal peat deposits shown in relation to the prehistoric coastline of Scilly.
(Source: Redrawn and modified from Ratcliffe and Stralker 1996, 3, fig.2)

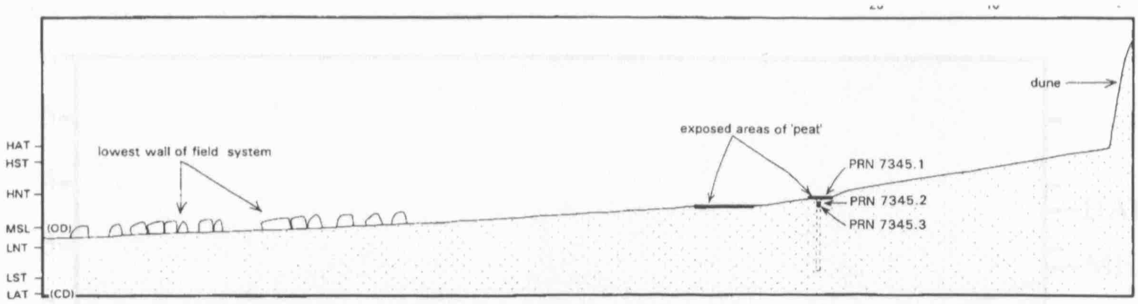


Fig. 4.8 A profile across Crab's Ledge beach showing the locations of the intertidal peats and their relationship to the present tidal range
Exposed lower peat 7345.1 = 1.22m OD (top 1cm) and 1.03m OD (basal);
Exposed upper peat 7354.1 = 1.21m OD (top 2cm) and 1.09 (basal);
Buried peat 7345.2 = 0.95m OD (top 2cm);
Buried peat 7345.3 = 0.78m OD (basal).
(Source: Ratcliffe and Stralker 1996, 23, fig. 22c)

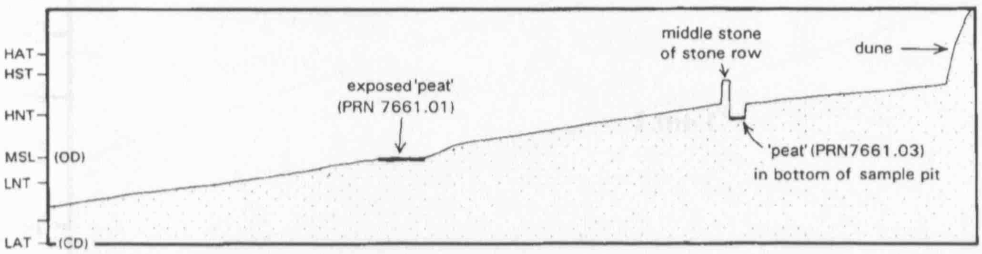


Fig.4.9 A profile across Par Beach showing the locations of intertidal peat deposits and their relationship to the present tidal range.
Expose peat 7661.01= -0.21 OD (surface)
Buried peat 7661.03 = 1.25m OD (surface)
(Source: Ratcliffe and Stralker 1996, 23, fig. 22a).

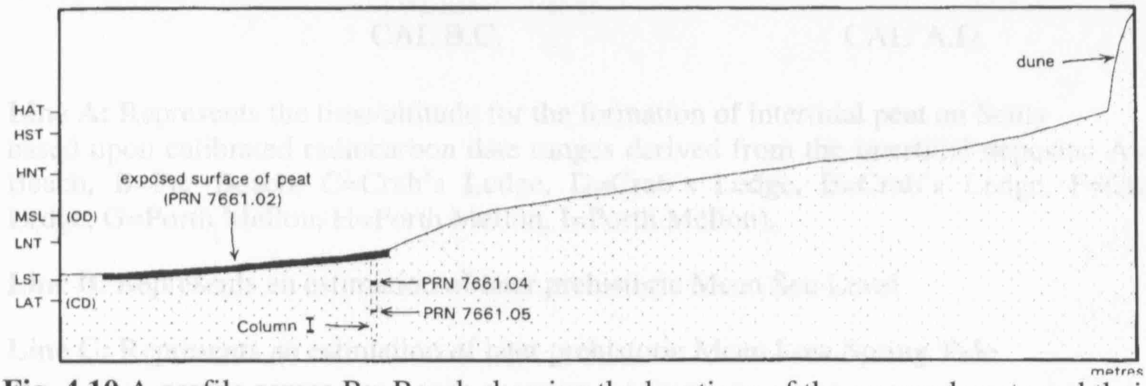
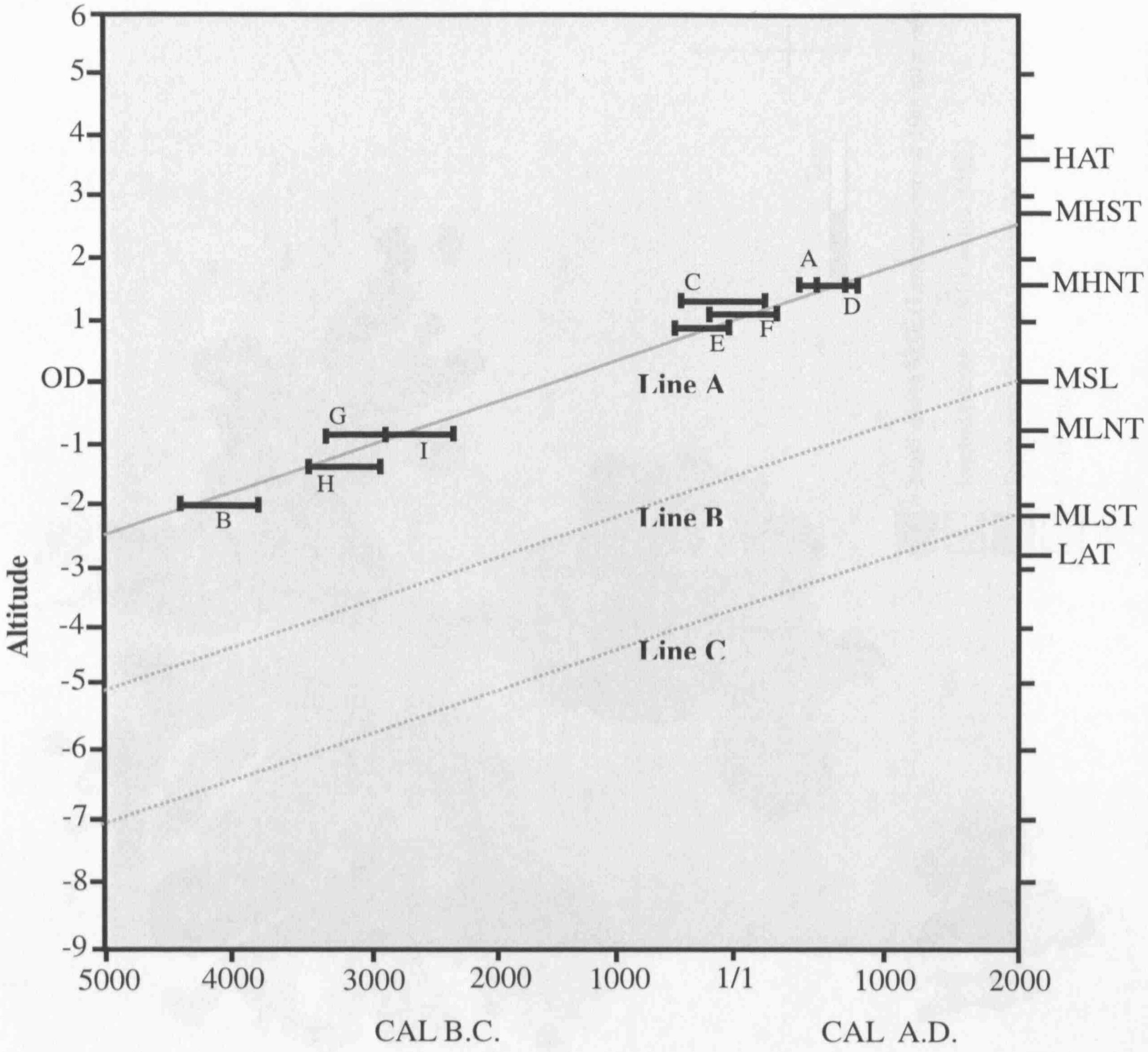


Fig. 4.10 A profile across Par Beach showing the locations of the exposed peats and their relationship to the present tidal range.
Exposed peat 7661.02 = -1.32 OD (top), 1.42 (middle) and 1.48m OD (middle);
Buried peat 7661.04 =-2.32m OD (top), -2.34 m OD (middle)
Buried peat 7661.05 = 3.3m OD (top)
(Source: Ratcliffe and Stralker 1996, 23, fig. 22b).



Line A: Represents the time/altitude for the formation of intertidal peat on Scilly based upon calibrated radiocarbon date ranges derived from the intertidal deposits: A=Par Beach, B=Par Beach, C=Crab's Ledge, D=Crab's Ledge, E=Crab's Ledge, F=Crab's Ledge, G=Porth Mellon, H=Porth Mellon, I=Porth Mellon).

Line B: Represents an estimation of later prehistoric Mean Sea Level

Line C: Represents an estimation of later prehistoric Mean Low Spring Tide

HAT=High Astronomical Tide, **MHST**=Mean High Spring Tide,
MHNT=Mean High Neap Tide**, MSL**=Mean Sea Level, **MLNT**=Mean Low Neap Tide,
MLST=Mean Low Spring Tide**, LAT**=Low Astronomical Tide

Fig. 4.11 A curve of sea-level change on Scilly.
(Source: Redrawn and modified from Ratcliffe and Stralker 1996, 50, fig.36).

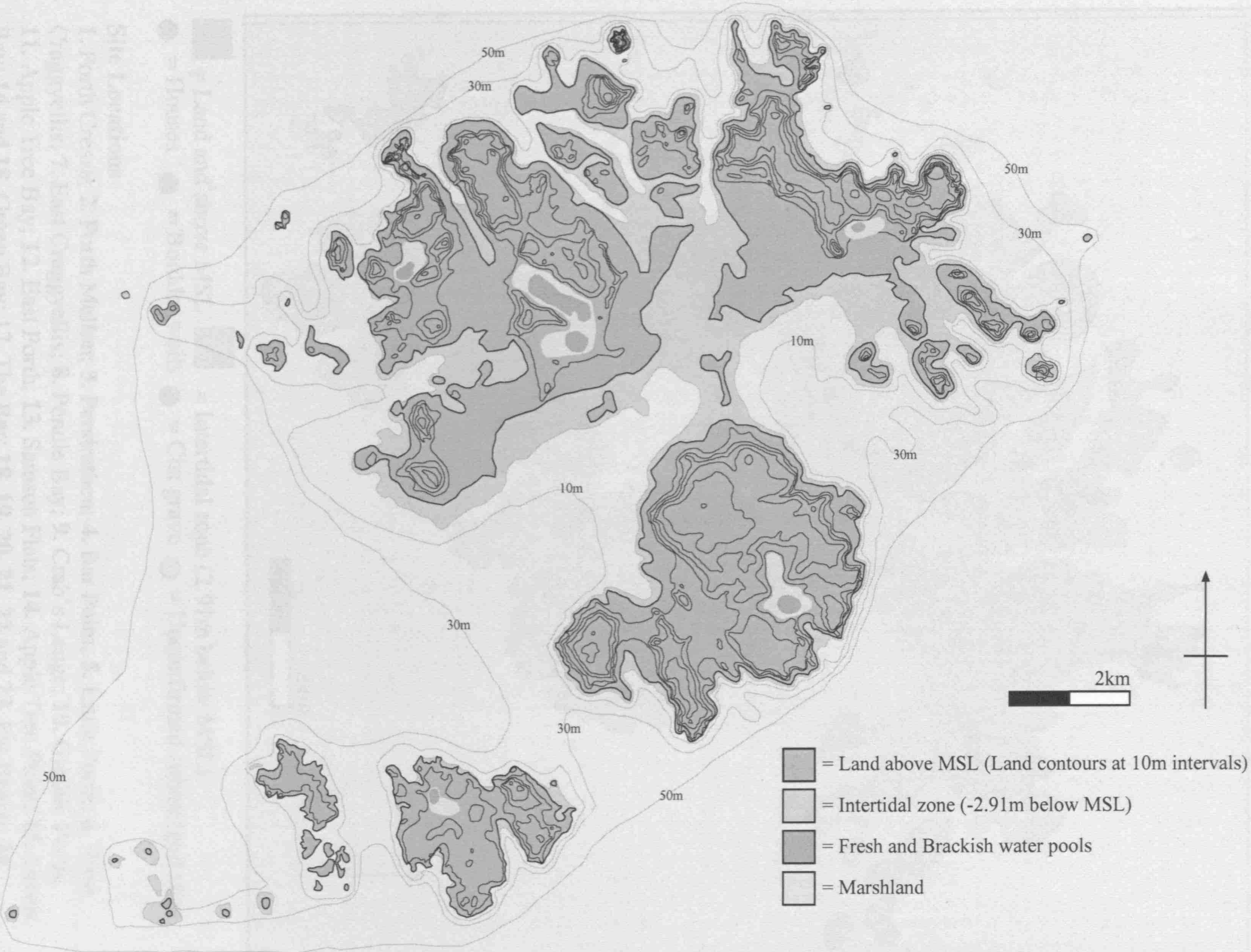
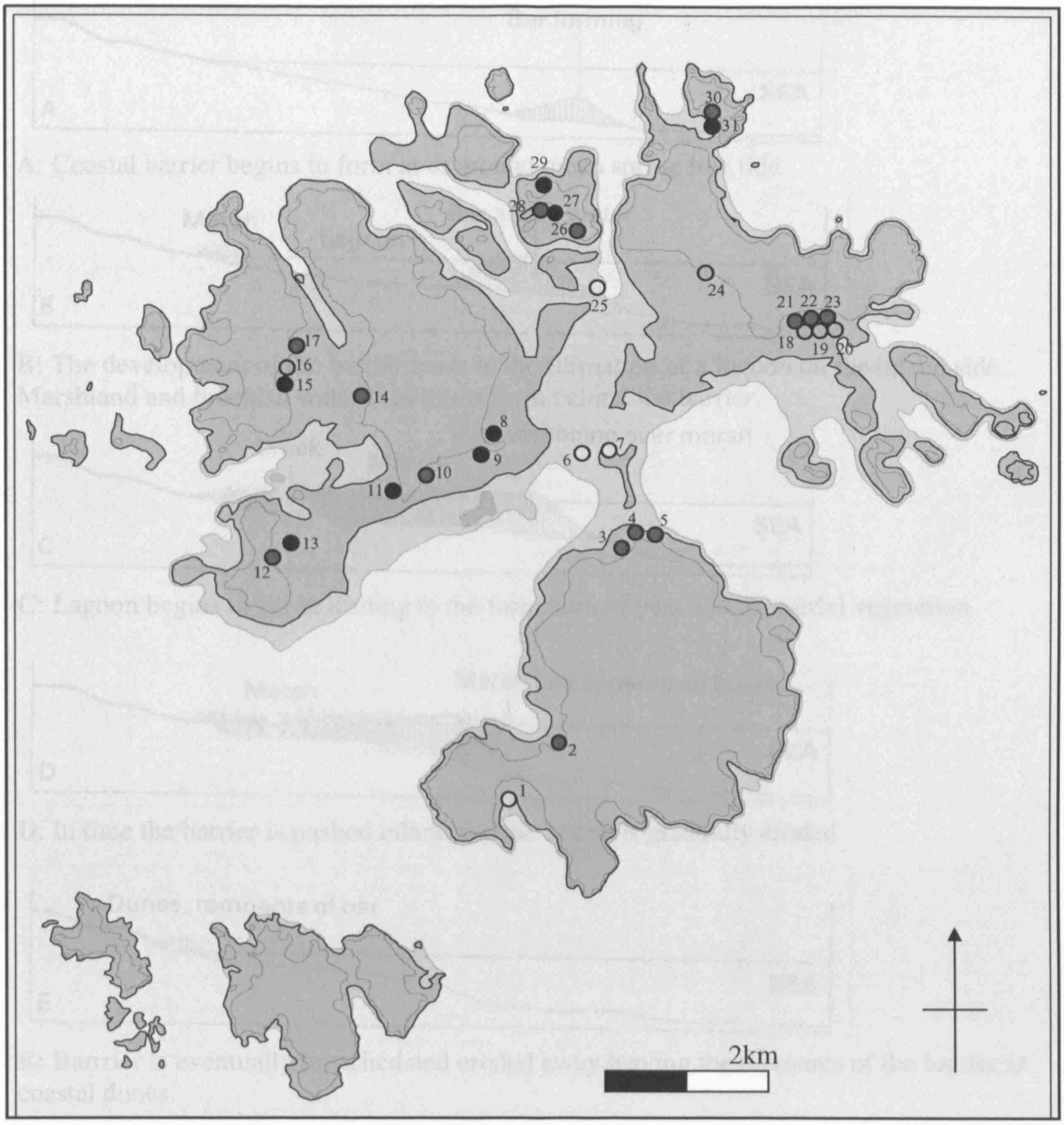


Fig. 4.12 A reconstruction of the prehistoric landscape of Scilly (circa. 2000 cal BC)

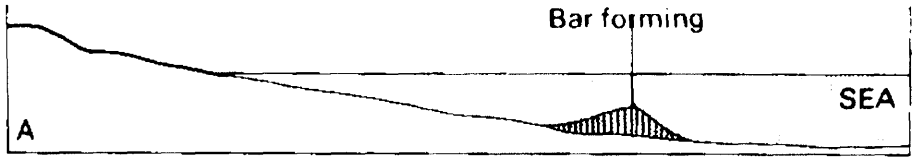


= Land and above MSL = Intertidal zone (2.91m below MSL)
= Houses = Boulder walls = Cist grave = Unconfirmed submerged sites

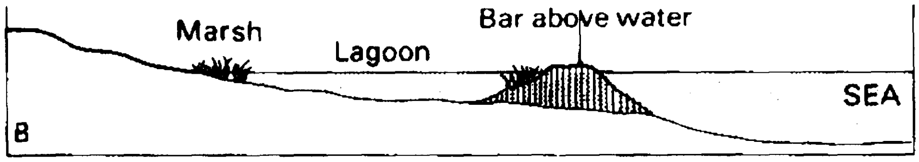
Site Locations

1. Porth Cressa; **2.** Porth Mellon; **3.** Pendrathen; **4.** Bar Point; **5.** Little Porth; **6.** West Craggyellis; **7.** East Craggyellis**; 8.** Pendle Bay; **9.** Crab's Ledge; **10.** Gimble Porth; **11.** Apple Tree Bay; **12.** East Porth; **13.** Samson Flats; **14.** Apple Tree Point; **15.** Green Bay; **16** and **18.** Green Bay; 17. The Bar; **18, 19, 20, 21, 22** and **23**. Par Beach; **24.** Lawrence Bay; **25.** Tean Channel; **26 and 27** East Porth**; 28.** Old Man **29**. West Porth **30** and **31.** Porth Morran.

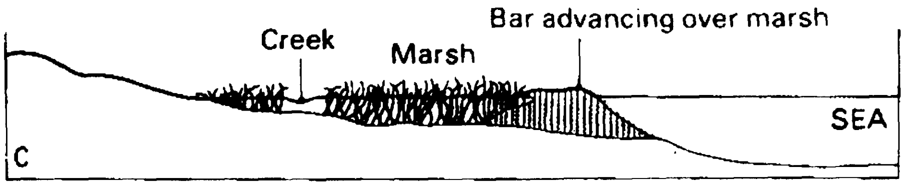
Fig. 4.13 Intertidal prehistoric sites on Scilly in relation to the prehistoric coastline



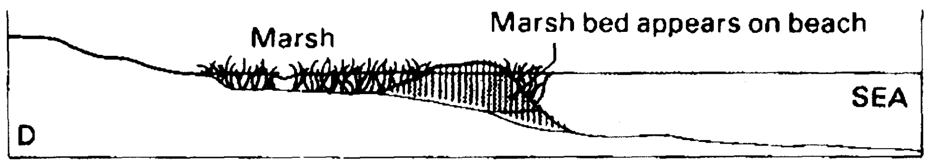
A: Coastal barrier begins to form at or around mean spring low tide



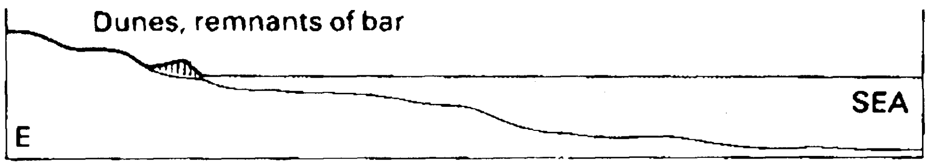
B: The development of the barrier leads to the formation of a lagoon on the inland side. Marshland and brackish water conditions form behind the barrier.



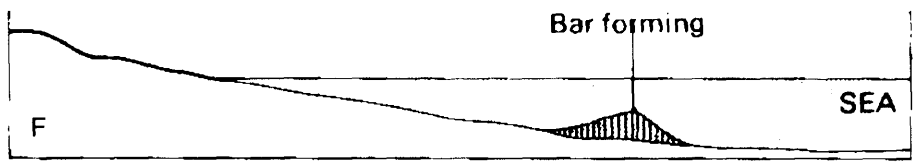
C: Lagoon begins to fill in leading to the formation of peat and terrestrial vegetation.



D: In time the barrier is pushed inland and the marsh is gradually eroded



E: Barrier is eventually breached and eroded away leaving the remnants of the barrier as coastal dunes.



F. Process of barrier formation may start again.

Fig. 4.14 The life-cycle of a coastal barrier
(Source: Lines and Bolwell 1993, 97).

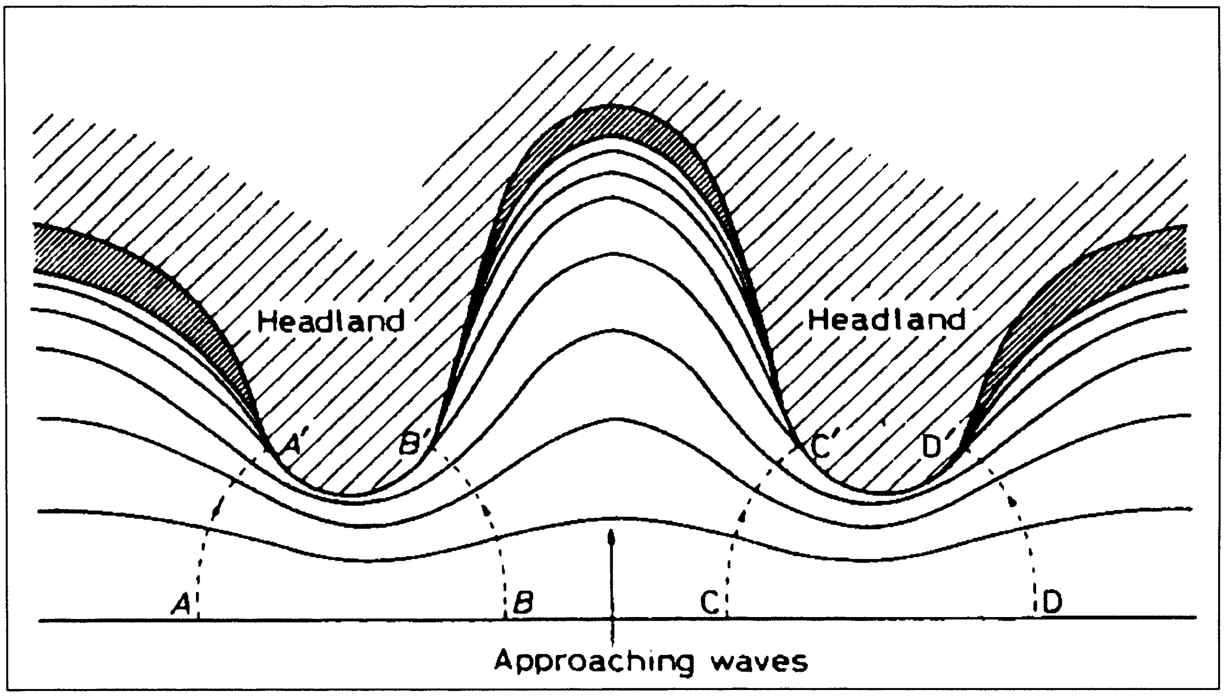


Fig. 4.15 Wave refraction and its effect upon a crenulated coastline.
Diagram illustrating the concentration of wave energy on headlands. The energy of the waves fronts between A - B and C - D becomes concentrated by wave refraction onto the short stretches of shore A' - B' and C' - D'. Within the bay the energy of wave front B - C becomes spread out around the shoreline B' - C'.
(Source Tait and Dipper 1997, 263, fig. 8.6.)

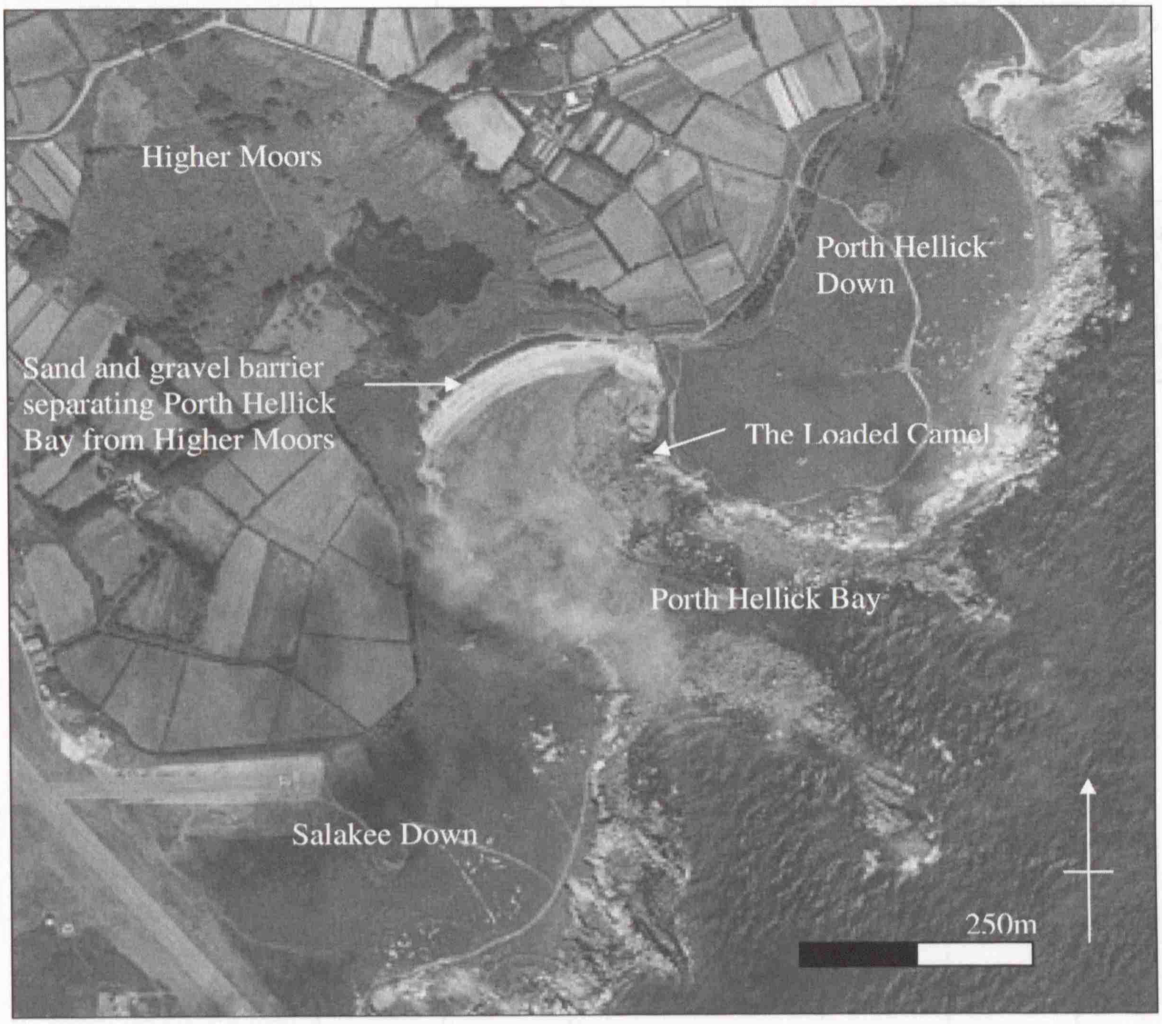


Fig. 4.16 Aerial photograph of Porth Hellick Bay showing the location of the sand and gravel barrier that separates the bay from Higher Moors. At the base of a large tor known as the Loaded Camel a Quartenary wave cut notch is found at approximately mean low spring tide (-2.21m OD).
(Source: English Nature)

	Higher Moors	Lower Moors	Bar Point	Halangy Porth	Porth Mellon	Nornour	Par Beach	Crab's Ledge
Medieval							Open conditions dominated with plants of disturbed ground, sand dunes and heathland	Open landscape but no evidence for local heathland
Romano-British	HM:4 Beginning of woodland clearance leading to open and pastoral landscape							Woodland and scrub largely cleared- saltmarsh and open ground
Iron Age		LM:2 and 3 same as HM:4	Open environment	Open environment		Mixed landscape- mainly well grazed grassland, but also some woodland and arable in general vicinity		
Bronze Age	HM:3 Woodlnad regeneration HM:2 Woodland reduced	LM:1 same as HM:3						
Neolithic	HM:1 Oak woodland with hazel, elm, ash and birch				Birch dominated woodland			
Mesolithic							Woodland- hazel, oak and birch	

Fig. 4.17 Summary of the major environmental conditions on Scilly. (Redrawn from Ratcliffe and Stralker 1996, 32, table 3)

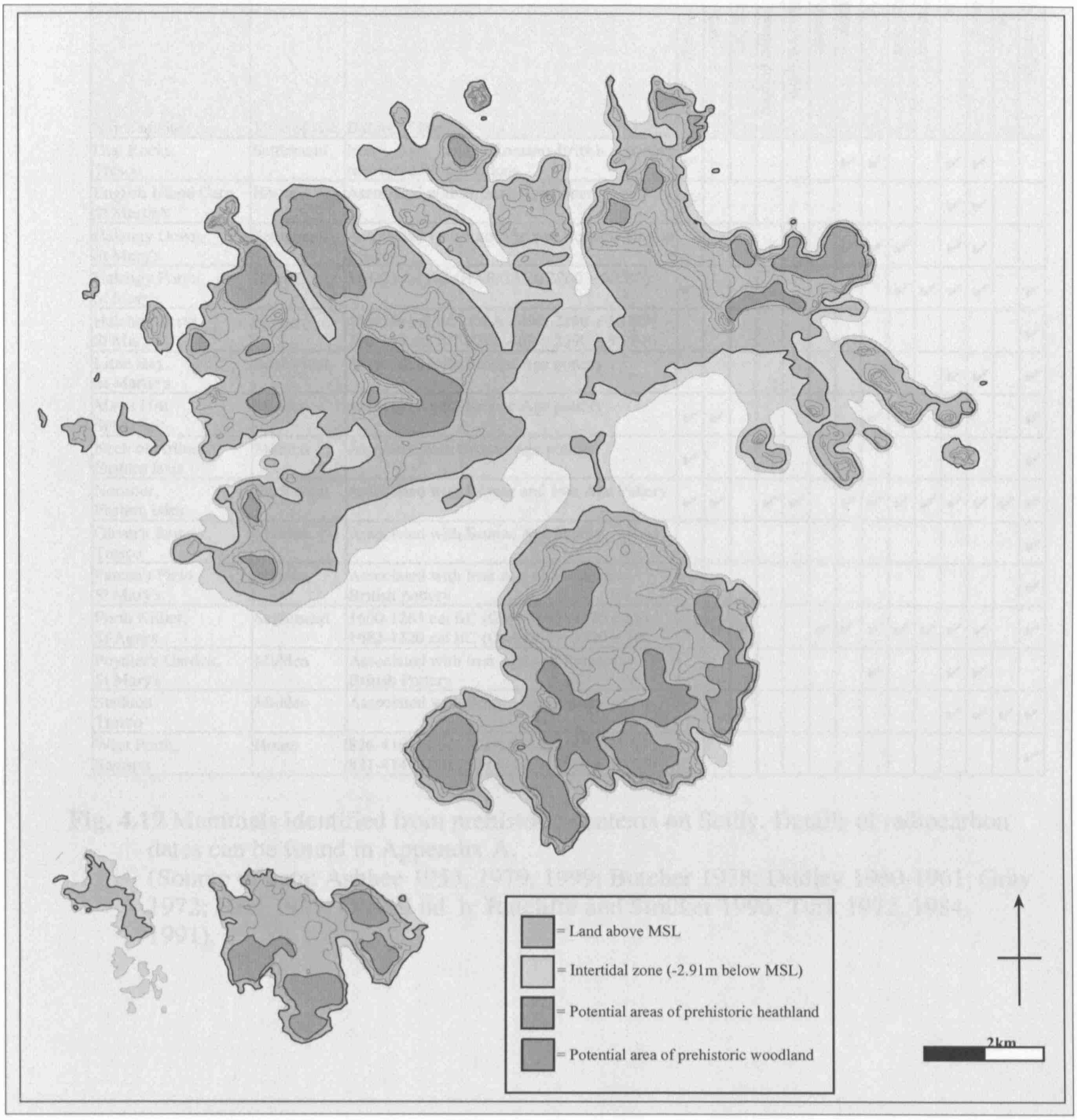


Fig.4.18 The potential distribution of prehistoric woodland and heathland on Scilly

Name of site	Type of site	Dating of site	Grey seal	Whale	Dolphin	Common dolphin	Risso's dolphin	Porpoise	Horse	Pig	Red deer	Roe deer?	Ox	Sheep	Goat	Unidentified
Dial Rocks, Tresco	Settlement	Iron Age and Romano-British pottery recovered from middens.	✔						✔	✔			✔	✔		
English Island Carn, St Martin's	House	Assosiated with Bronze Age pottery	✔										✔	✔		
Halangy Down, St Mary's	Settlement	Associated with Iron Age and Romano British pottery							✔	✔	✔		✔	✔		
Halangy Porth, St Mary's	House	518-60 cal BC (HAR-1313; 2260 ± 90 BP)	✔						✔		✔	✔	✔	✔		✔
Halangy Porth, St Mary's	House	400-174 cal BC (OxA-4696; 2250 ± 50 BP) 760-365 cal BC (OxA-4697; 2390 ± 50 BP)														✔
Little Bay, St Martin's	Settlement	Associated with Bronze Age pottery											✔	✔		✔
May's Hill, St Matin's	Midden	Associated with Bronze Age pottery	✔	✔						✔	✔		✔			✔
Neck of Arthur, Eastern Isles	Midden	Associted with Bronze Age pottery	✔													✔
Nornour, Eastern Isles	Settlement	Associated with Bronze and Iron Age Pottery	✔	✔		✔	✔		✔	✔	✔	✔	✔	✔	✔	✔
Oliver's Battery, Tresco	Midden	Associated with Bronze Age pottery														✔
Parson's Field, St Mary's	Midden	Associated with Iron Age and Romano-British pottery														✔
Porth Killier, St Agnes	Settlement	1600-1265 cal BC (OxA-3648; 3170 ± 65) 1682-1320 cal BC (OxA-3647; 3220 ± 70)	✔	✔	✔			✔	✔	✔	✔	✔	✔	✔		✔
Poynter's Garden, St Mary's	Midden	Associated with Iron Age and Romano-British Pottery								✔			✔	✔		
Staddon, Tresco	Midden	Associated with Bronze Age pottery	✔										✔	✔	✔	✔
West Porth, Samson	House	826-410 cal BC (OxA-3650; 2545 ± 65 BP) 831-414 cal BC (OxA-3651; 2570 ± 65 BP)														✔

Fig. 4.19 Mammals identified from prehistoric contexts on Scilly. Details of radiocarbon dates can be found in Appendix A.
(Source of data: Ashbee 1953, 1979, 1999; Butcher 1978; Dudley 1960-1961; Gray 1972; Neal 1983; O'Neil nd. h; Ratcliffe and Stralker 1996; Turk 1972, 1984, 1991).

Birds	Site type	Date	Greater black backed gull	Great auk	Guillemot	Razorbill	Puffin	Pigeon	Buzzard	Barn owl	Spotted fly catcher	Skylark	Blackbird	Redshank	Redwing	Song thrush	Sparrow	Mistle thrush	Ruff	Wren	House sparrow	Raven	Jackdaw	Unidentified
Dial Rocks, Tresco	Settlement	Associated Iron Age and Bronze Age pottery					✔																	
English island Carn, St Martin's	House	Associated with Bronze Age pottery																						✔
Halangy Down, St Mary's	Settlement	Associated with Iron Age and Romano British pottery	✔	✔						✔						✔	✔	✔					✔	✔
Halangy Porth, St Mary's	House	400-174 cal BC (OxA-4696; 2250 ± 50 BP) 760-365 cal BC (OxA-4697; 2390 ± 50 BP)																						✔
Halangy Porth ®, St Mary's	House	518-60 cal BC (HAR-1313; 2260 ± 90 BP)																						✔
Little Bay, St Martin's	Settlement	Associated with Bronze Age pottery			✔																			✔
May's Hill, St Martin's	Midden	Associated with Bronze Age pottery				✔	✔									✔						✔		✔
Middle Town, St Agnes	Midden	Associated with chronologically undistinctive 'prehistoric' pottery																						
Nornour, Eastern Isles	Settlement	Associated with Bronze Age and Iron Age pottery				✔	✔	✔				✔	✔	✔					✔			✔		✔
Oliver's Battery, Tresco	Midden	Associated with Bronze Age pottery																						✔
Periglis, St Agnes	Midden	Associated with Bronze Age and Iron Age pottery				✔																		
Porth Killier, St Agnes	House	1600-1265 cal BC (OxA-3648; 3170 ± 65 BP) 1682-1320 cal BC (OxA-3647; 3220 ± 70 BP)				✔	✔				✔		✔			✔		✔		✔				✔
Poynter's Garden, St Mary's	Midden	Associated with Iron Age and Romano-British pottery																						✔
Staddon, Tresco	Midden	Associated with Bronze Age pottery							✔															✔
West Porth, Samson	House	826-410 cal BC (OxA-3650; 2545 ± 65 BP) 831-414 cal BC (OxA-3651; 2570 ± 65 BP)																						✔

Fig 4.20 (Cont) Bird species identified from prehistoric contexts on Scilly. Details of radiocarbon dates are found in Appendix A. (Source of data: Ashbee 1983, 1999; Butcher 1978; Dudley 196-0-1961; Gray 1972; Neal 1983; O'Neil nd. h; Ratcliffe and Stralker 1996; Turk 1971, 1983. 1991).

Birds	Site type	Date	Greater black backed gull	Great auk	Guillemot	Razorbill	Puffin	Pigeon	Buzzard	Barn owl	Spotted fly catcher	Skylark	Blackbird	Redshank	Redwing	Song thrush	Sparrow	Mistle thrush	Ruff	Wren	House sparrow	Raven	Jackdaw	Unidentified
Dial Rocks, Tresco	Settlement	Associated Iron Age and Bronze Age pottery					✔																	
English island Carn, St Martin's	House	Associated with Bronze Age pottery																						✔
Halangy Down, St Mary's	Settlement	Associated with Iron Age and Romano British pottery	✔	✔						✔						✔	✔	✔					✔	✔
Halangy Porth, St Mary's	House	400-174 cal BC (OxA-4696; 2250 ± 50 BP) 760-365 cal BC (OxA-4697; 2390 ± 50 BP)																						✔
Halangy Porth ®, St Mary's	House	518-60 cal BC (HAR-1313; 2260 ± 90 BP)																						✔
Little Bay, St Martin's	Settlement	Associated with Bronze Age pottery			✔																			✔
May's Hill, St Martin's	Midden	Associated with Bronze Age pottery				✔	✔									✔						✔		✔
Middle Town, St Agnes	Midden	Associated with chronologically undistinctive 'prehistoric' pottery																						
Nornour, Eastern Isles	Settlement	Associated with Bronze Age and Iron Age pottery				✔	✔	✔				✔	✔	✔					✔			✔		✔
Oliver's Battery, Tresco	Midden	Associated with Bronze Age pottery																						✔
Periglis, St Agnes	Midden	Associated with Bronze Age and Iron Age pottery				✔																		
Porth Killier, St Agnes	House	1600-1265 cal BC (OxA-3648; 3170 ± 65 BP) 1682-1320 cal BC (OxA-3647; 3220 ± 70 BP)				✔	✔				✔		✔			✔		✔		✔				✔
Poynter's Garden, St Mary's	Midden	Associated with Iron Age and Romano-British pottery																						✔
Staddon, Tresco	Midden	Associated with Bronze Age pottery							✔															✔
West Porth, Samson	House	826-410 cal BC (OxA-3650; 2545 ± 65 BP) 831-414 cal BC (OxA-3651; 2570 ± 65 BP)																						✔

Fig 4.20 (Cont) Bird species identified from prehistoric contexts on Scilly. Details of radiocarbon dates are found in Appendix A. (Source of data: Ashbee 1983, 1999; Butcher 1978; Dudley 196-0-1961; Gray 1972; Neal 1983; O'Neil nd. h; Ratcliffe and Stralker 1996; Turk 1971, 1983. 1991).

Common Name	Latin Name	2nd millennium BC	1st mil lennium BC	Habitat	Seasonality
Domestic fowl	*Gallus sp.*	✔	✔	Open grassland, pasture, cereal fields and field margins.	Introduced (all year resident)
Great northern diver	*Gavia immer*		✔	Coastal waters	Winter visitor (August to May)
Shearwater	*Puffinus sp.*	✔	✔	Open oceans. Only comes to land after dark. Nests in cliffs and stable boulder beaches.	Summer visitor (February to July)
Gannet	*Sula bassana*	✔	✔	Open ocean. Nests on remote cliffs	All year resident
Cormorant	*Phalacrocorax carbo*	✔	✔	Rocky coasts	All year round at sea
Shag	*Phalacrocorax aristotelis*		✔	Inshore waters and rocky coasts	All year resident
Grey heron	*Ardea cinerea*	✔	✔	Near edges of shallow lakes and estuaries	Migrant and winter visitor
White stork	*Ciconia ciconia*	✔		Open wetlands of damp meadows or pasture	Very rare vagrant / winter visitor
Swan	*Cygnus*	✔	✔	Saltmarsh, Lakes and wetland	Winter visitor (October to May)
Brent goose	*Branta bernicla*		✔	Sea coasts with intertidal mudflats	Vagrant / winter visitor (October to March)
Goose		✔	✔	Lakes and wetland	Migrant / winter visitor (October to May)
Duck	*Anas*		✔	Lakes, wetland and sheltered coasts	Migrant / winter visitor
Shelduck	*Tadorna tadorna*	✔	✔	Sheltered coasts with sand dunes and mud flats.	Migrant / winter visitor
Black goose	*Lyrurus tetrix*		✔	Uplands and the edges of moors	Migrant / winter visitor
Grey Partridge	*Perdix perdix*		✔	Open grassland, pasture, cereal fields and field margins.	Introduced (all year resident)
Pheasant / fowl	*Phasianus / Gallus*		✔	Open grassland, pasture, cereal fields and field margins	Introduced (all year resident)

Fig 4.21 Chart shows the presence and absence of birds identified from prehistoric contexts on Scilly, their habitats and resident or migratory status (Continued overleaf).

Common Name	Latin Name	2nd millennium BC	1st millennium BC	Habitat	Resident
Corncrake	*Crex crex*	✔		Fringes of marshes and farmland	Migrant (April to September)
Coot	*Fulica atra*	✔		Freshwater and brackish lakes, and sheltered coastal waters	Resident (population increases during winter
Lapwing	*Vallenus vallenus*	✔	✔	Farmland, cultivated ground, bare soil and wet grassland marsh	Migrant / winter visitor
Knot	*Calidris cantutus*		✔	Seashore especially mudflats	Migrant / Winter visitor
Redshank	*Tringa totanus*		✔	Saltmarsh	Resident / migrant
Ruff	*Philomachus pugnax*	✔		Brackish water and lowland water meadows	Migrant (March to June)
Godwit	*Limosa*	✔	✔	Marsh and mudflats	Migrant / winter visitor
Woodcock	*Scolopax rusticola*		✔	Woodland and heather moors	Migrant / winter visitor
Snipe	*Gallinago gallinago*		✔	Moorland bogs and wet pasture marshes	Migrant / winter visitor
Stone-curlew	*Burhinus oedicneus*	✔	✔	Bare stony ground, farmland, heathland and sandunes	Winter visitor (a few remain during the summer)
Lesser black gull	*Largus argentatus/ fuscus*		✔	Coastal, sand dunes And shingle islands	Summer visitor
Greater blackbacked gull	*Larus marinus*		✔	Rocky coasts and islands	All year resident
Great auk	*Alca impennis*		✔	Coastal waters	Extinct (Summer visitor)
Guillemot	*Uria aalge*	✔	✔	Open sea, offshore islands and rocky stacks	Summer visitor (some staying over winter)

Fig 4.21 (cont). Chart shows the presence and absence of birds identified from prehistoric contexts on Scilly, their habitats and resident or migratory status (Source of data: Ashbee 1983, 1999; Butcher 1978; Dudley 196-0-1961; Gray 1972; Neal 1983; O'Neil nd. h; Ratcliffe and Stralker 1996; Turk 1971, 1983. 1991). (Continued overleaf).

Common Name	Latin Name	1st millenium BC	2nd millennium BC	Habitat	Resident
Razor bill	*Alca torda*	✔	✔	Open sea, nest on cliff faces and bstable boulder beaches	Summer visitor (some staying over winter)
Puffin	*Fratercula artica*	✔	✔	Offshore cliff faces	Summer visitor (March to July)
Pigeon	*Columba*	✔	✔	Rocky coastal cliff	Resident
Barn owl	*Tyto alba*		✔	Open country, coastal marshes, fringes of forests	Rare winter visitor
Spotted fly catcher	*Muscicapa striata*	✔		Edges and glades of woodland	Migrant / summer visitor (May to August)
Skylark	*Alauda arvensis*	✔	✔	Heath, coastal marshes and farmland	Resident / migrant
Blackbird	*Turdus merula*		✔	Woodland and open land	Resident / migrant
Redwing	*Turdus iliacus*	✔		Farmland and scrub	Migrant / winter visitor (October to March)
Song thrush	*Turdus philomelos*	✔	✔	Woodland and scrub	Resident / migrant
Mistle thrush	*Turdus viscivorus*	✔		Open woodland, scrub and grassland	Migrant / winter visitor
Wren	*Troglodytes troglodyes*	✔		Farm land, cliff tops and offshore islands	Resident
House sparrow	*Passer domesticus*		✔	Farmland	Resident (partial migrant)
Raven	*Corvus corax*	✔	✔	Coastal cliffs	Occasional visitor
Jackdaw	*Corvus monedula*		✔	Rocky sea cliffs	Migrant

Fig 4.21 (Cont.) Chart shows the presence and absence of birds identified from prehistoric contexts on Scilly, their habitats and resident or migratory status (Source of data: Ashbee 1983, 1999; Butcher 1978; Dudley 196-0-1961; Gray 1972; Neal 1983; O'Neil nd. h; Ratcliffe and Stralker 1996; Turk 1971, 1983. 1991).

Site	Type of site	Date	Elasmobranch	Common eel	Conger eel	Cod	Whiting	Pollack	Saithe	Ling	Hake	John Dory	Gunard	Red Gunard	Bass	Sea bream	Black sea bream	Red sea bream	Gilthead	Grey mullet	Mullet	Thick-lipped mullet	Wrasse	Ballam wrasse	Cuckoo wrasse	Corkwing wrasse	Mackrel	Turbot	Plaice	Dab	Unidentified
Bonfire Carn, Bryher	House																														✓
Dial Rocks, Tresco	Settlement	Associated with Iron Age and Romano British pottery											✓								✓					✓					
English Island Carn, St Martin's	House	Associated with Bronze Age pottery																													✓
Halangy Down, St Mary's	Settlement	Associated with Iron Age and Romano-British pottery	✓		✓	✓	✓	✓								✓	✓	✓					✓	✓			✓		✓		
Halangy Porth, St Mary's	House	400-174 cal BC (OxA-4696; 2250 ± 50 BP) 760-365 cal BC (OxA-4697; 2390 ± 50 BP)																													✓
Little Bay, St Martin's	Settlement	Associated with Bronze Age pottery			✓	✓		✓	✓								✓	✓	✓					✓							✓
May's Hill, St Martin's	Midden	Associatedwith Bronze Age pottery		✓	✓		✓	✓		✓		✓	✓		✓						✓			✓	✓				✓		✓
Neck of Arthur, Eastern Isles	Midden	Associated with bronze Age pottery																													✓
Nornour, Eastern Isles	Settlement	Associated with Bronze Age and Iron Age pottery			✓			✓		✓	✓				✓								✓					✓	✓		
Oliver's Battery, Tresco	Midden	Associated with Bronze Age pottery																													✓
Parson's Field, St Mary's	Midden	Associated with Iron Age and Romano-British pottery																													✓
Periglis, St Agnes	Midden	Associated with Bronze Age and Iron Age pottery																								✓					
Porth Killier, St Agnes	Settlement	1600-1265 cal BC (OxA-3648; 3170 ± 65 BP) 1682-1320 cal BC (OxA-3647; 3220 ± 70 BP)		✓	✓		✓	✓	✓				✓	✓	✓					✓	✓	✓	✓	✓					✓	✓	✓
Poynter's Garden, St Mary's	Midden	Associated with Romano-British pottery																													✓
West Porth, Samson	House	826-410 cal BC (OxA-3650; 2545 ± 65 BP) 831-414 cal BC (OxA- 3651; 2570 ± 65 BP)																													✓

Fig. 4.22 Presence and absence of species of fish found within prehistoric contexts on Scilly.
(Source: Data taken from: Ashbee 1952, 1979, 1983, 1999; Butcher 1978; Dudley 196-1961; Gray 1972; Neal 1983; O'Neil nd. d, nd. h; Turk 1971, 1991).

Common name	Latin name	Habitat	Seasonality
Common eel	*Anguilla anguilla*	Fresh and brackish waters	All year resident
Conger eel	*Conger conger*	Rocky coastal waters (0-100m). Common at the base of cliffs and rock pinnacles.	All year resident. Retreats to deeper waters from January to March
Cod	*Gadus morhua*	Coastal and offshore waters (500-600m) Moves into shallower inshore during winter.	September to April
Whiting	*Merlangius merlangus*	Around rocky coasts (10 – 200m)	September to January
Pollack	*Pollachius pollachius*	Pelagic or close to bottom near coasts to depths of 200m	April to November
Saithe	*Polachius virens*	Exclusively pelagic to depths of 200m	April to November
Ling	*Molva molva*	Deep-water fish living at depths of 100-1000m.	Ling move into shallower coastal waters between June to November.
Hake	*Merluccius merliccuius*	Depths of 100-300m. Live near bottom during the day and rise to the surface at night	All year resident
John Dory	*Zues faber*	Pelagic, Near bottom in moderate depths of 5-400m	Moves into shallow waters between June and November
Red gunard *cf.* gunard	*Aspitrigla cuculus*	Bottom living, depths of 10-150m on soft or mixed ground	April to November
Bass	*Dicentrarchus labrax*	Close to rocky coast and over rough ground in depth up to 10m	April to November
Black sea-bream	*Spondyliosoma cantharus*	Pelagic and found at depths of 200-1000m although occasionally moves into shallow coastal waters (0-100m) during summer	April to September

Fig 4.23 Fish recovered from archaeological contexts on Scilly showing their habitat and seasonality.
(Source: Data taken from: Ashbee 1952, 1979, 1983, 1999; Butcher 1978; Dudley 196-1961; Gray 1972; Neal 1983; O'Neil nd. d, nd. h; Turk 1971, 1991).
(Continued overleaf).

Common name	Latin name	Habitat	Migratory
Red sea-bream	*Pagellus bogaraveo*	Rough ground Depths of 10-200m	April to September Moves into shallow waters between May to July
Gilthead	*Sparus aurata*	Swallow coastal and brackish waters	All year resident
Mullet	*Mugilidae*	Sandy or rocky bottoms at depths of between 5-60m	All year resident
Thick-lipped mullet	*Crenimugil labrosus*	Shallow lagoons above a soft bottom and in dense vegetation	All year resident
Cuckoo wrasse	*Labrus mixtus*	Found over rocky ground and within the algal zone at depths of between 2-200m (usually found 20-80m)	All year resident
Ballan wrasse	*Labrus bergylta*	Inshore waters over rocky ground, algal zone and within lower shore pools at depths between 5-30m	All year resident
Corkwing wrasse	*Crenilabus melops*	Algal zone of rocky coasts and within lowers shore pools at depths between 5-50m	All year resident
Mackerel	*Scomber scombrus*	Pelagic fish found in large schools at depths between 0-150m.	May to September
Turbot	*Scuhthalmus maximus*	Sandy, rocky or mixed bottoms 20-70m. Presence suggests the presence of fairly extensively developed sandy bays.	All year resident
Plaice	*Pleuronectes platessa*	Bottom living species at depths of 0-200m	All year resident (Can be caught from shoreline between April and December)
Dab	*Limanda limanda*	Bottom living species on sandy ground in depths of 0-150m	All year resident (Can be caught from shoreline between May and February)

Fig 4.23 (cont.) Fish recovered from archaeological contexts on Scilly showing their habitat and seasonality.
(Source: Data taken from: Ashbee 1952, 1979, 1983, 1999; Butcher 1978; Dudley 196-1961; Gray 1972; Neal 1983; O'Neil nd. d, nd. h; Turk 1971, 1991).

Site	Type of site	Date	Common Cockle	Common Limpet	Rough limpet	Mussel	Oyster	Great scallop	Thick topshell	Purple topshell	Warty venus	Purple dogwhelk	Strand shell	Flat periwinkle	periwinkle	Unidentified	Round snail	Banded shell	Edible crab	Unidentified
Carn Windlass, Annet	House	Associated with Neolithic and Bronze Age pottery		✔																✔
Dial Rocks, Tresco	Settlement	Associated with Iron Age and Romano-British pottery		✔																
English island Carn, St Martin's	House	Associated with Bronze Age pottery		✔																✔
Halangy Down, St Mary's	Settlement	Associated with Iron Age and Romano-British pottery		✔	✔		✔			✔				✔	✔			✔		✔
Halangy Porth, St Mary's	House	400-174 cal BC (OxA-4696; 2250 ± 50 BP) 760-365 cal BC (OxA-4697; 2390 ± 50 BP)		✔																✔
Higher Town, St Agnes	Midden	Associated with Iron Age and Romano-British pottery		✔																
Little Bay, St Martin's	Settlement	Associated with Bronze Age pottery		✔																✔
May's Hill, St Martin's	Midden	Associated with Bronze Age pottery																		✔
Neck of Arthur, Eastern Isles	Midden	Associated with Bronze Age pottery														✔				
Nornour, Eastern Isles	Settlemet	Associated with Bronze Age and Iron Age pottery	✔	✔	✔		✔	✔	✔		✔	✔	✔				✔	✔	✔	✔
Oliver's Battery, Tresco	Midden	Associated with Bronze Age pottery		✔																
Periglis, St Agnes	Midden	Associated wwith Iron Age and Romano-British pottery		✔																
Porth Cressa, St Mary's	House	1524-1316 cal BC (OxA-4701; 3165 ± 55 BP) 1680-1413 cal BC (GU-5413; 3250 ± 50 BP)		✔																
Porth Killier, St Agnes	Settlement	1600-1265 cal BC (OxA-3648; 3170 ± 65 BP) 1682-1320 cal BC (OxA-3647; 3220 ± 60 BP) 369-942 cal BC (OxA-4700; 2935 ± 55B)P		✔																
Poynter's Garden, St Mary's	Midden	Associated with Iron Age and Romano-British pottery	✔	✔			✔								✔					
Staddon, Bryher	Midden	Associated with Bronze Age pottery		✔																
Tregear's Porth, St Mary's	House	Associated with Bronze Age pottery		✔																

Fig. 4.24 Presence and absence of species of marine molluscs found within prehistoric contexts on Scilly. Details of radiocarbon dates can be found in Appendix A. (Source: Data derived from Ashbee 1954, 1955, 1968, 1974, 1983, 1999; Butcher 1978; Dudley 1960-1961; Gray 1972; Neal 1983; O'Neil nd. d, nd. h; Pollard 1952; Ratcliffe and Stralker 1996; Turk 1968, 1979, 1984, 1991).

Common Name	Latin Name	Habitat
Common cockle	*Cerastoderma edule*	Burrows into sublittoral sand and gravel at depths of 3-100m
Common limpet	Patella vulgata	High shore to sublittoral fringe. Rocky shores of all densities of exposure. Highest densities of *vulgata* coincide with wave exposed conditions. Not associated with shores with dense growth of sea weed.
Rough limpet	*Patella aspera*	High shore to sublittoral fringe. Rocky shores of all densities of exposure.
Mussel	*Mytilus edulis*	High intertidal to shallow sub-tidal. Rock shores of open coasts attached to rocks.
Oyster	*Ostrea edulis*	Highly productive estuarine and shallow coastal waters. Firm bottom of mud rocks etc.
Great scallop	*Pecten maximus*	Offshore to depths of 100m
Thick topshell	*Monodonata lineata*	Rocky shores, mid shore region, moderately exposed. Requires stable boulder field or broken shore with exposed rock
Purple topshell	*Gibbula umblicalis*	Upper shore into sub littoral, sheltered rocky shores, tolerant of emersion in brackish waters.
Warty venus	*Venus verruscosa*	Found in shallow coastal water in sand
Dog whelk Purple dog whelk	*Nucella lapillus*	Wave exposed and sheltered rocky shores. Mid shore downward. Rarely present in the sub-littoral may be abundant in areas exposed to extremely strong tidal stress.
Flat Periwinkle	*Littorina littoralis*	Mid to lower tidal levels o rocky shores. Range of exposures. Can tolerate low salinity
Common periwinkle	*Littorina littorea*	Rocky coasts. All but most exposed. Upper shore into sub-littoral also in sheltered sand and muddy habitats. Can tolerate low salinity.
Edible crab	*Cancer pagurus*	Lower shore, shallow sublittoral and offshore to depths of 100m

Fig.4.25 Species of marine molluscs and crustaceans and their habitats identified within prehistoric contexts on Scilly
(Source of data: www.marlin.ac.uk)

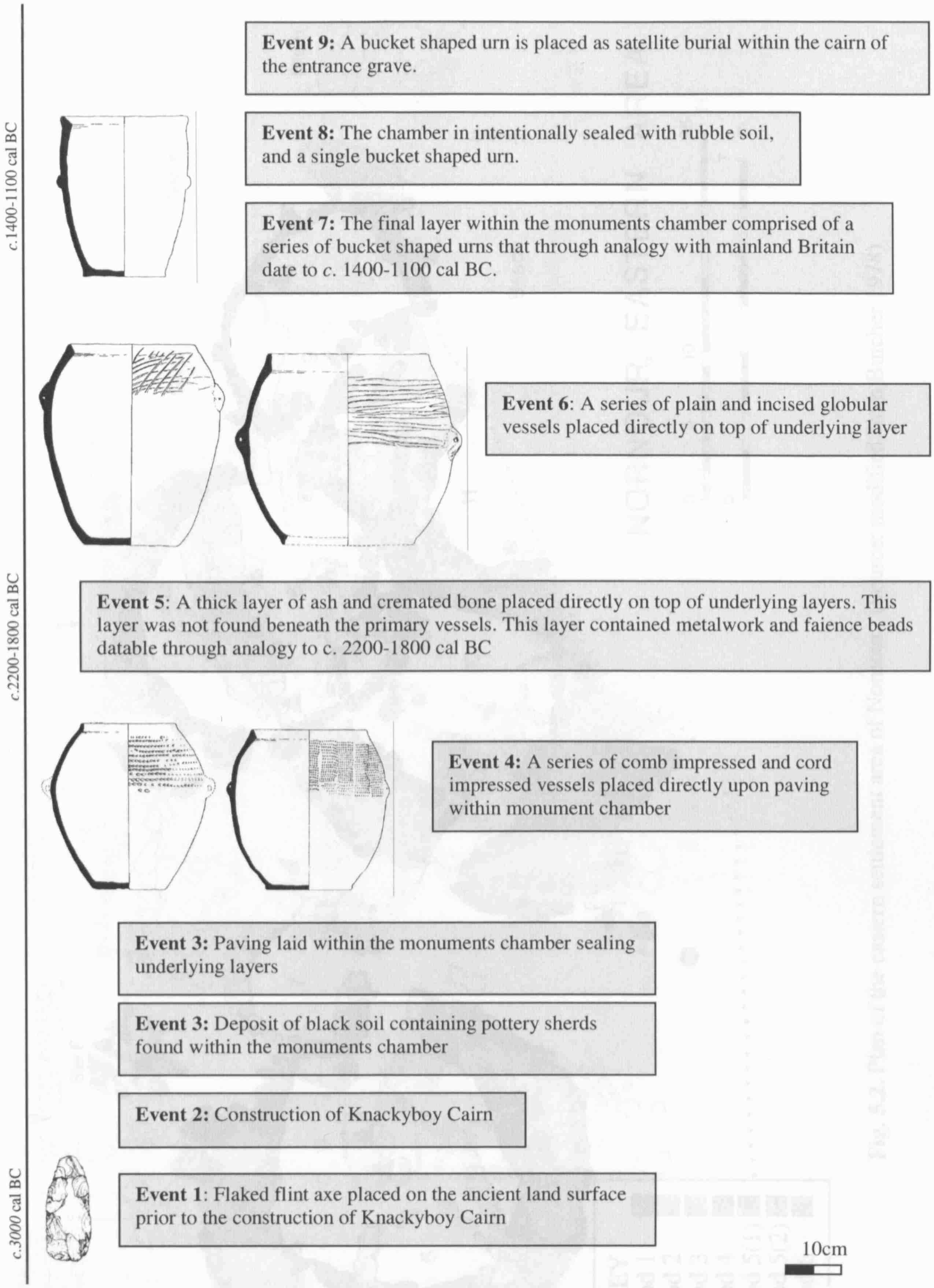


Fig 5.1 The constructional and depositional sequence for the entrance grave of Knackyboy Cairn, St Martin's. (All artefact to same scale)

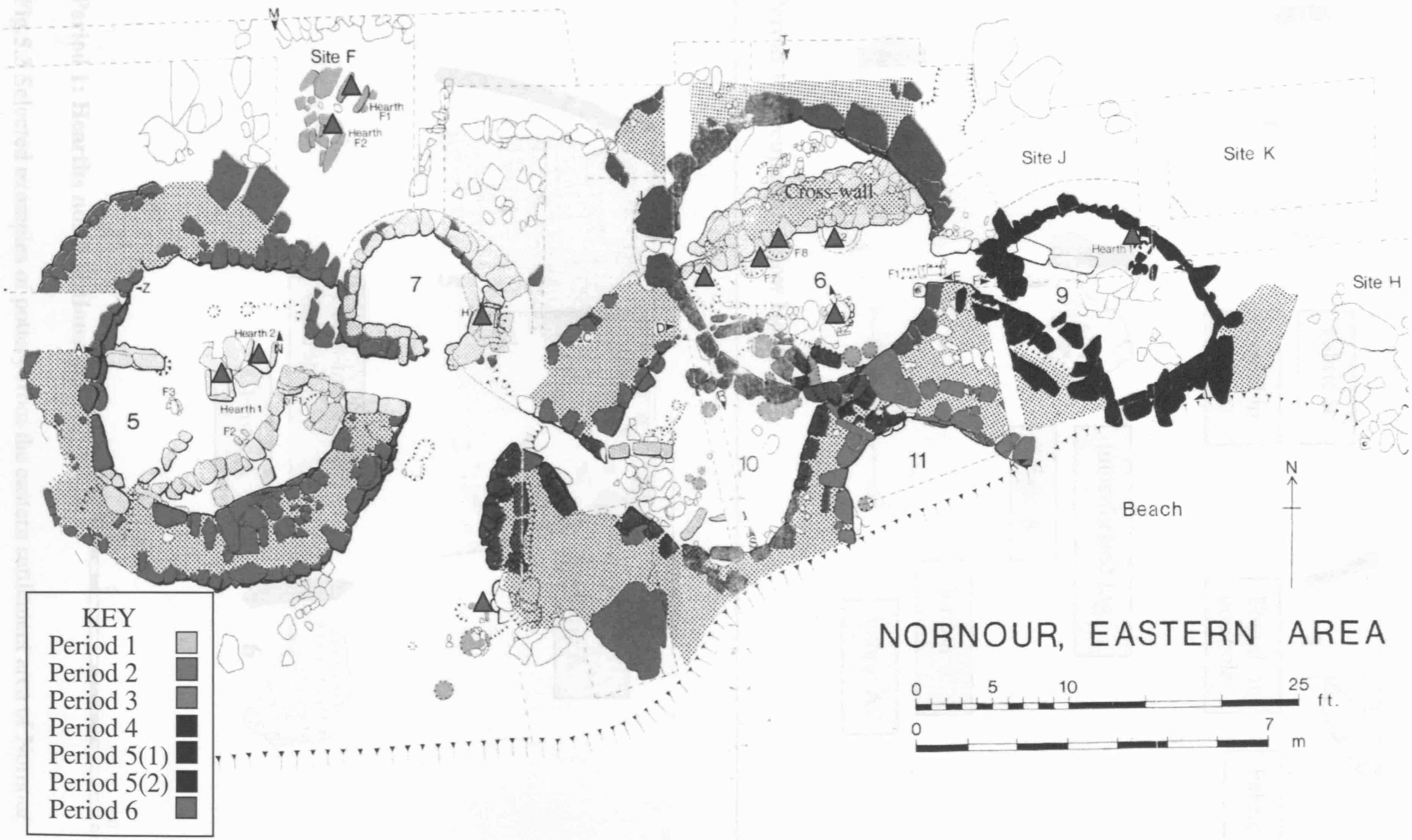
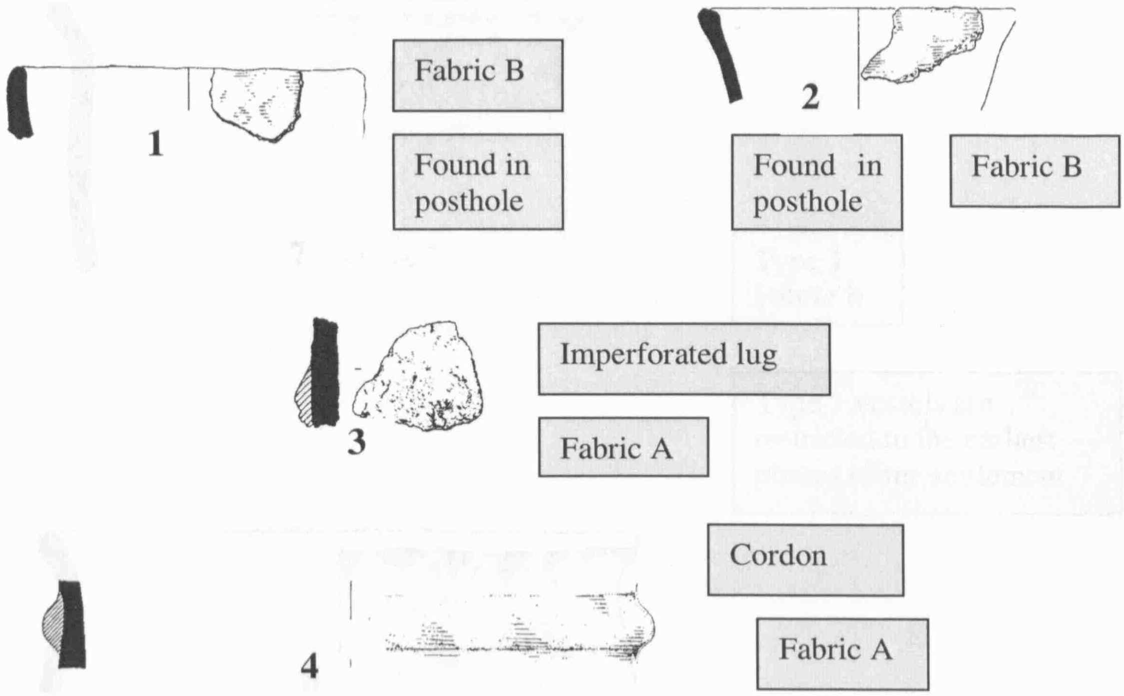
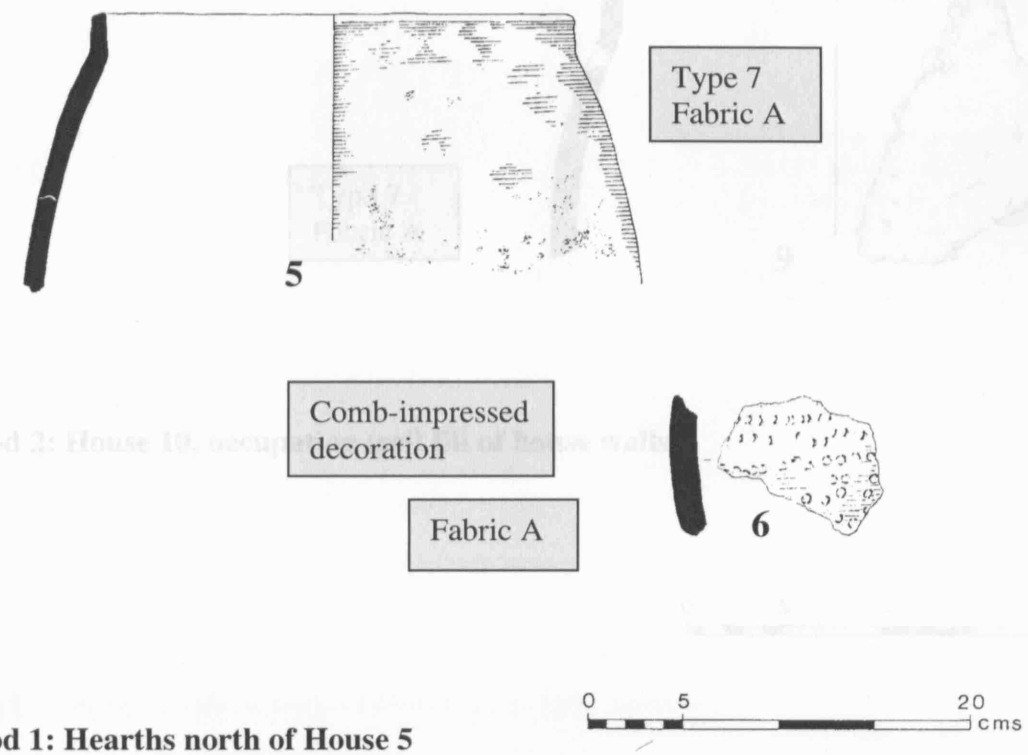


Fig. 5.2. Plan of the eastern settlement area of Nornour (Source: modified from Butcher 1978)

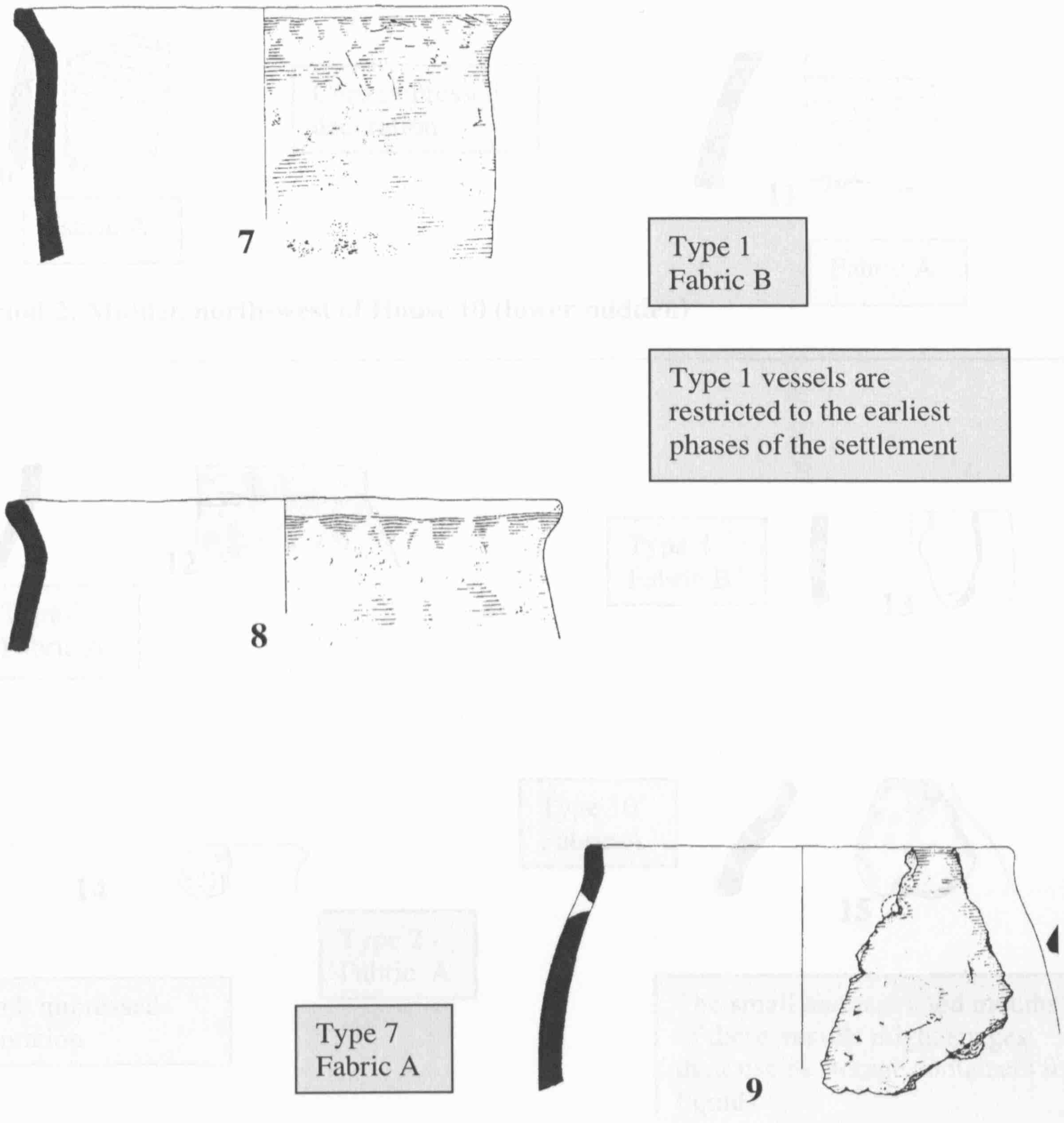


Period 1: Occupation below House 10



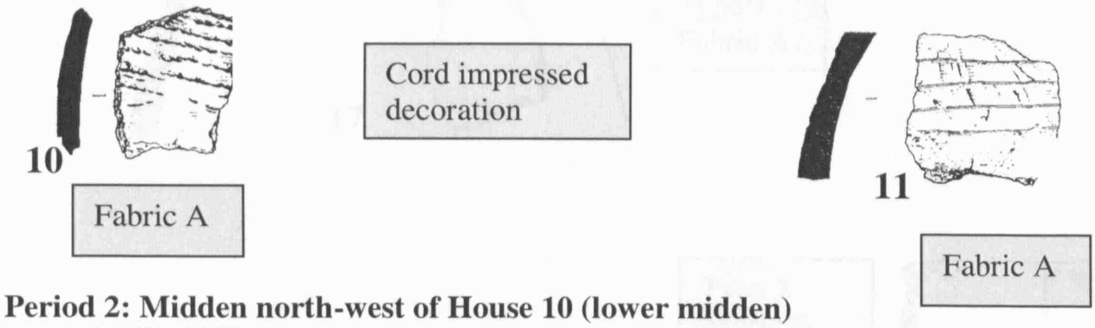
Period 1: Hearths north of House 5

Fig.5.3 Selected examples of pottery from the eastern settlement area of Nornour

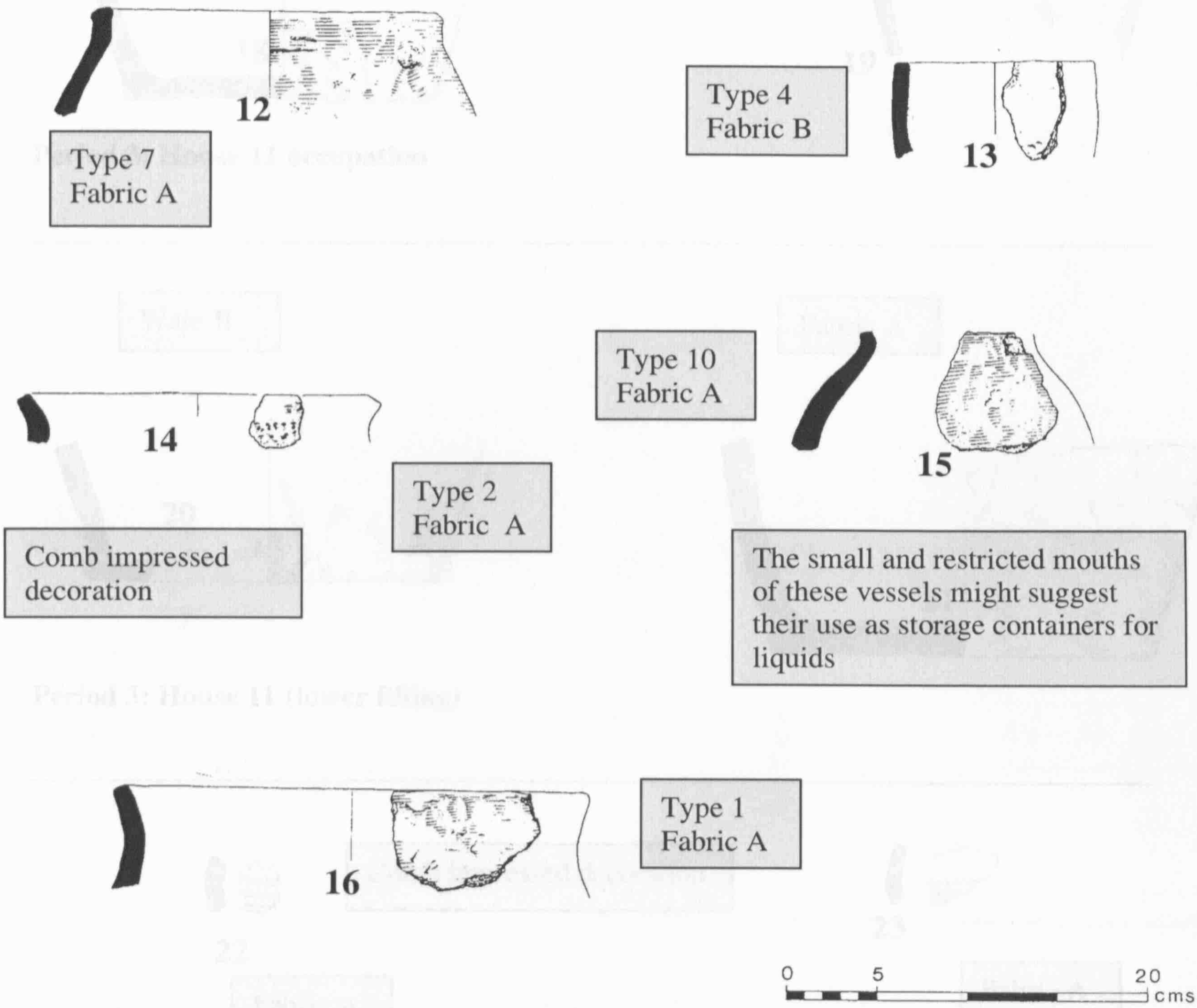


Period 2: House 10, occupation (soil fill of house walls)

Fig.5.4 Selected examples of pottery from the eastern settlement area of Nornour



Period 2: Midden north-west of House 10 (lower midden)



Period 2: Midden north-west of House 10 (upper midden)

Fig.5.5 Pottery from the settlement of Nornour, Eastern Isles

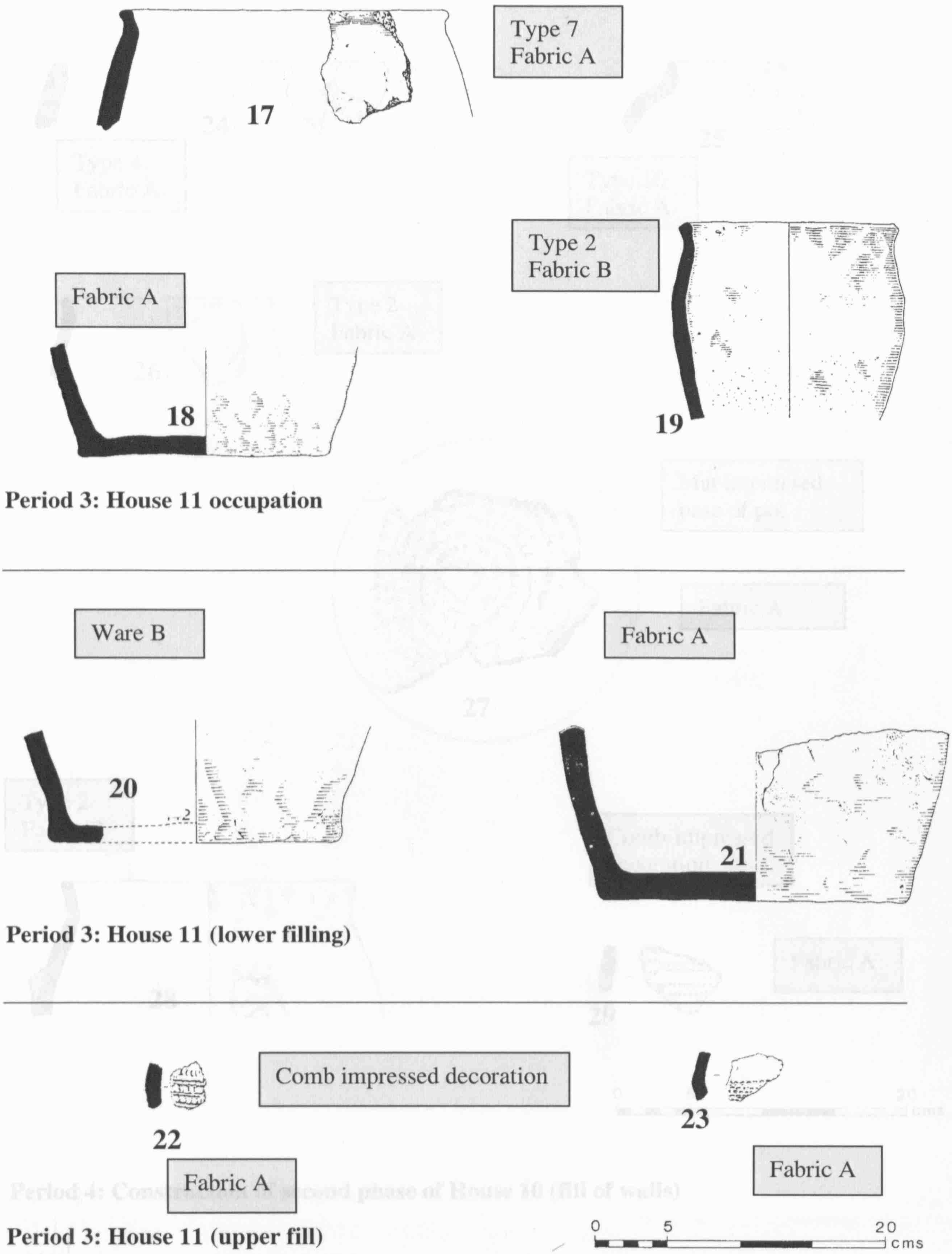
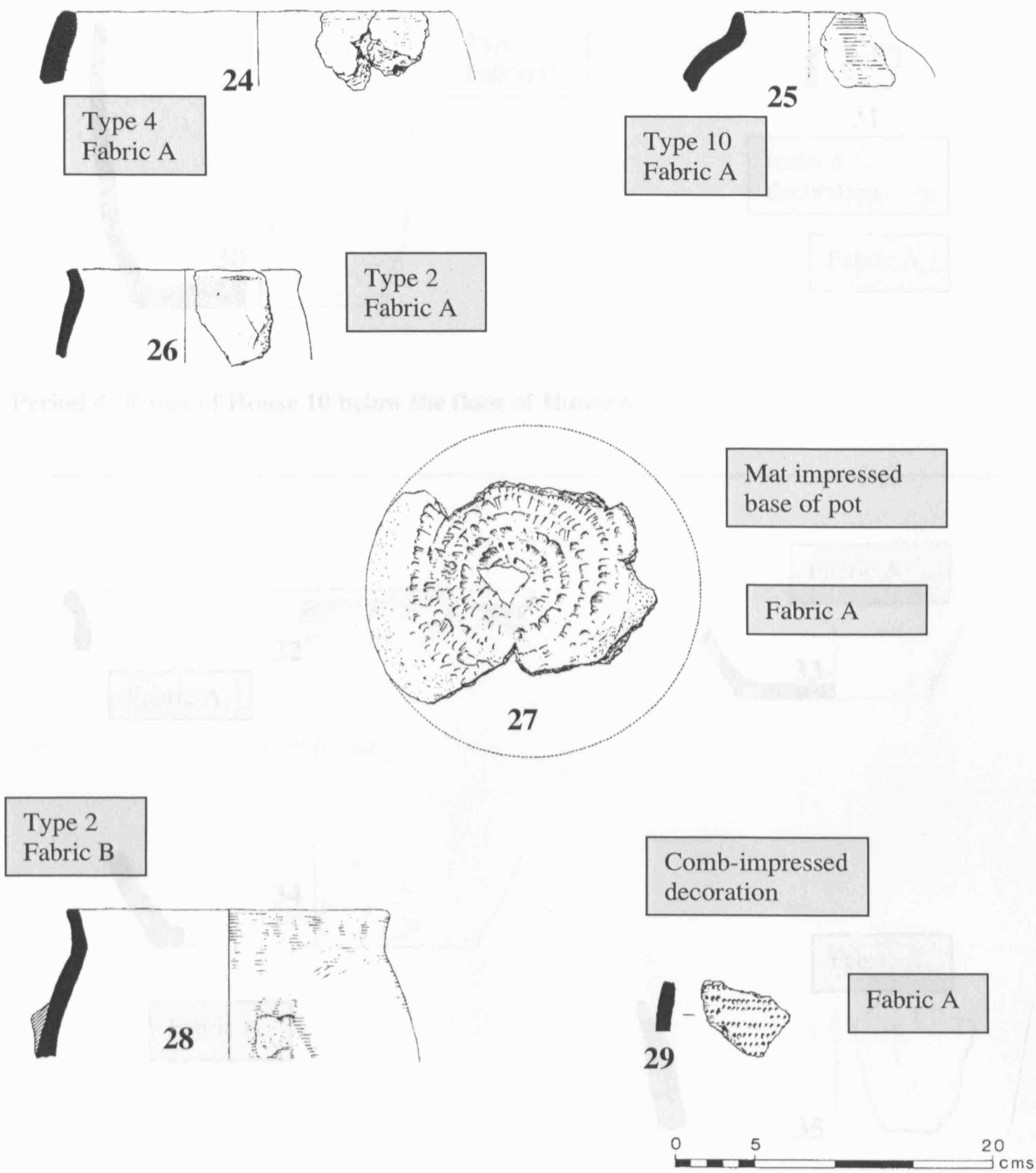


Fig. 5.6 Selected examples of pottery from the eastern settlement area of Nornour



Period 4: Construction of second phase of House 10 (fill of walls)

Fig.5.7 Selected examples of pottery from the eastern settlement area of Nornour

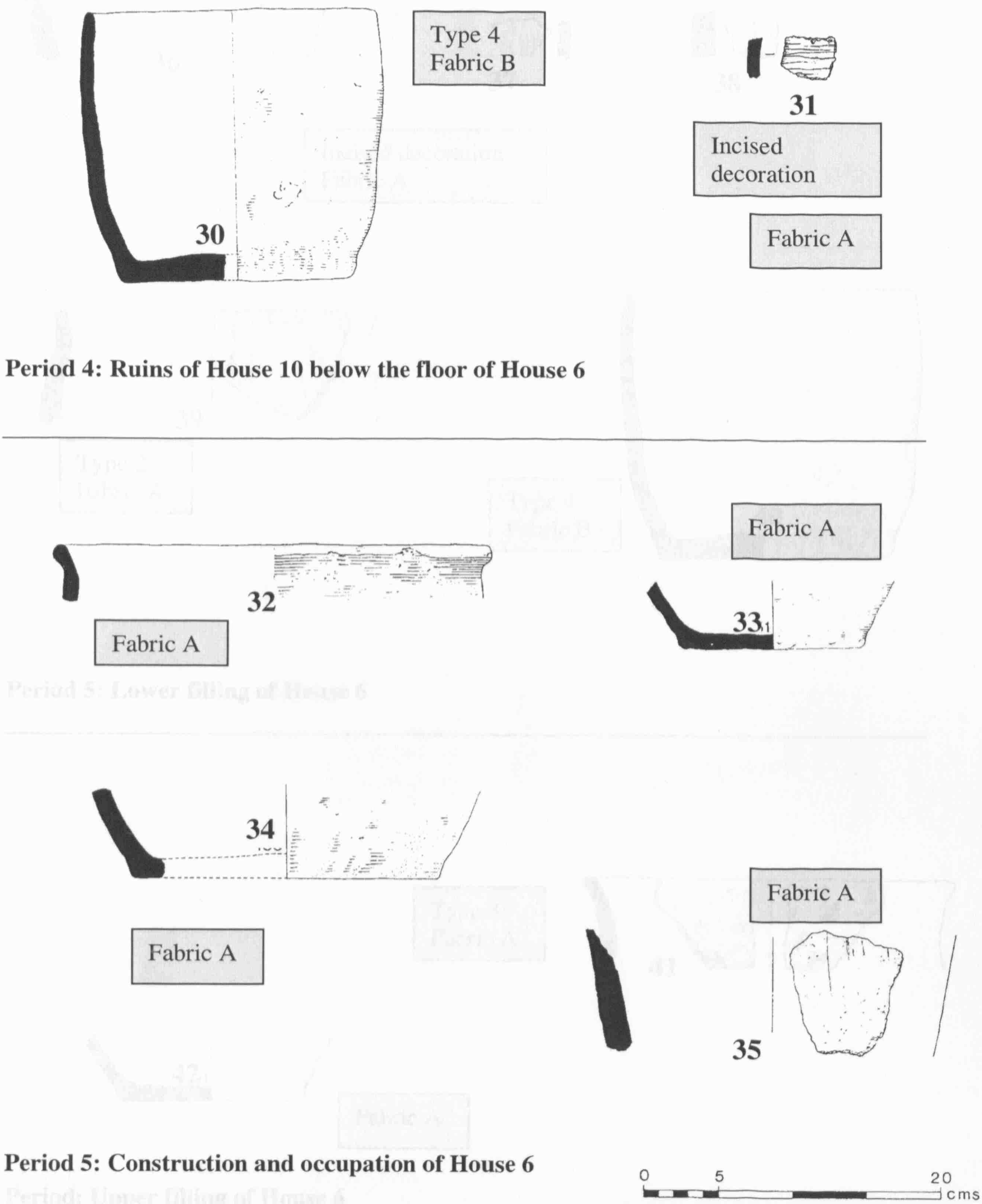
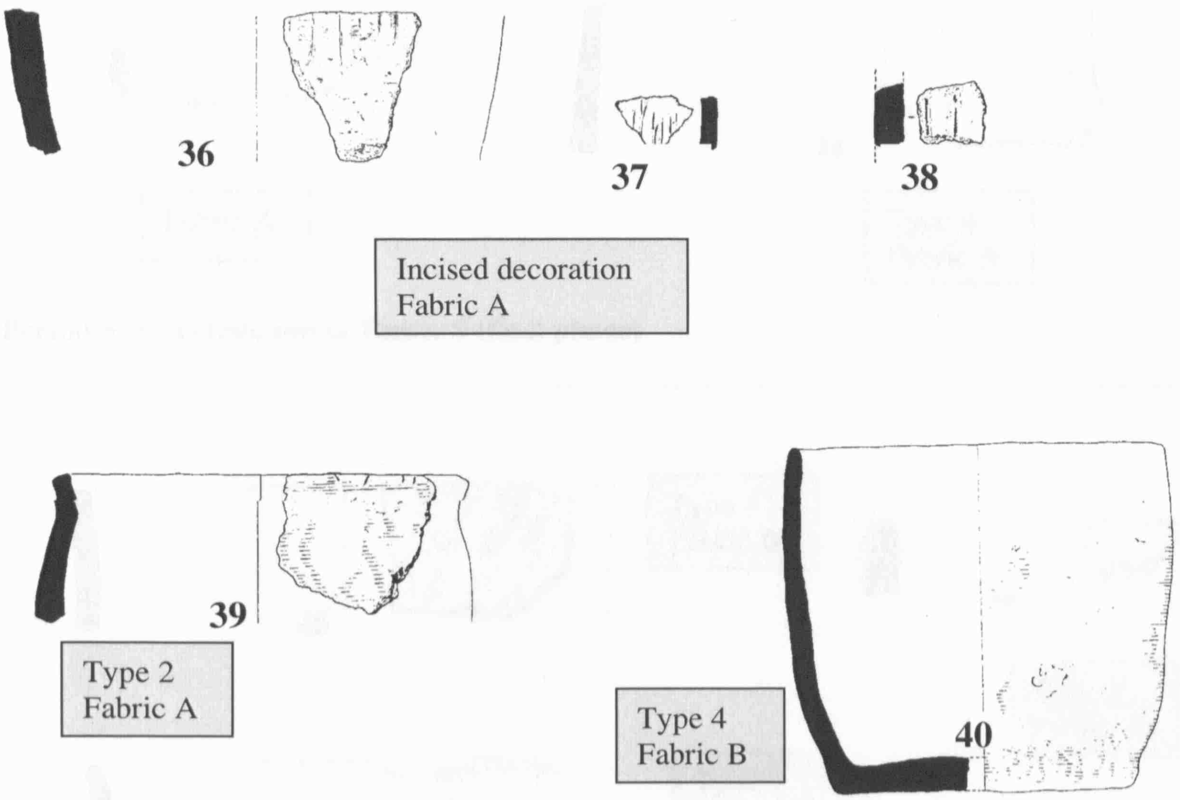
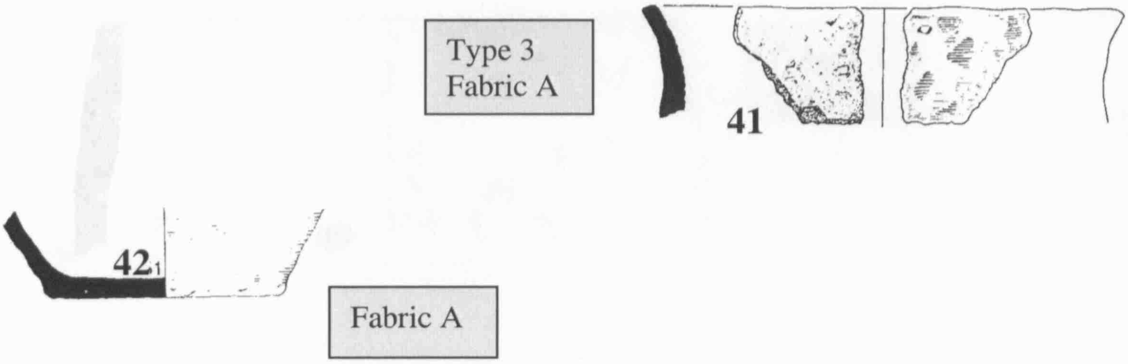


Fig. 5.8 Selected examples of pottery from the eastern settlement area of Nornour



Period 5: Lower filling of House 6



Period: Upper filling of House 6

Fig. 5.9 Selected examples of pottery from the eastern settlement area of Nornour

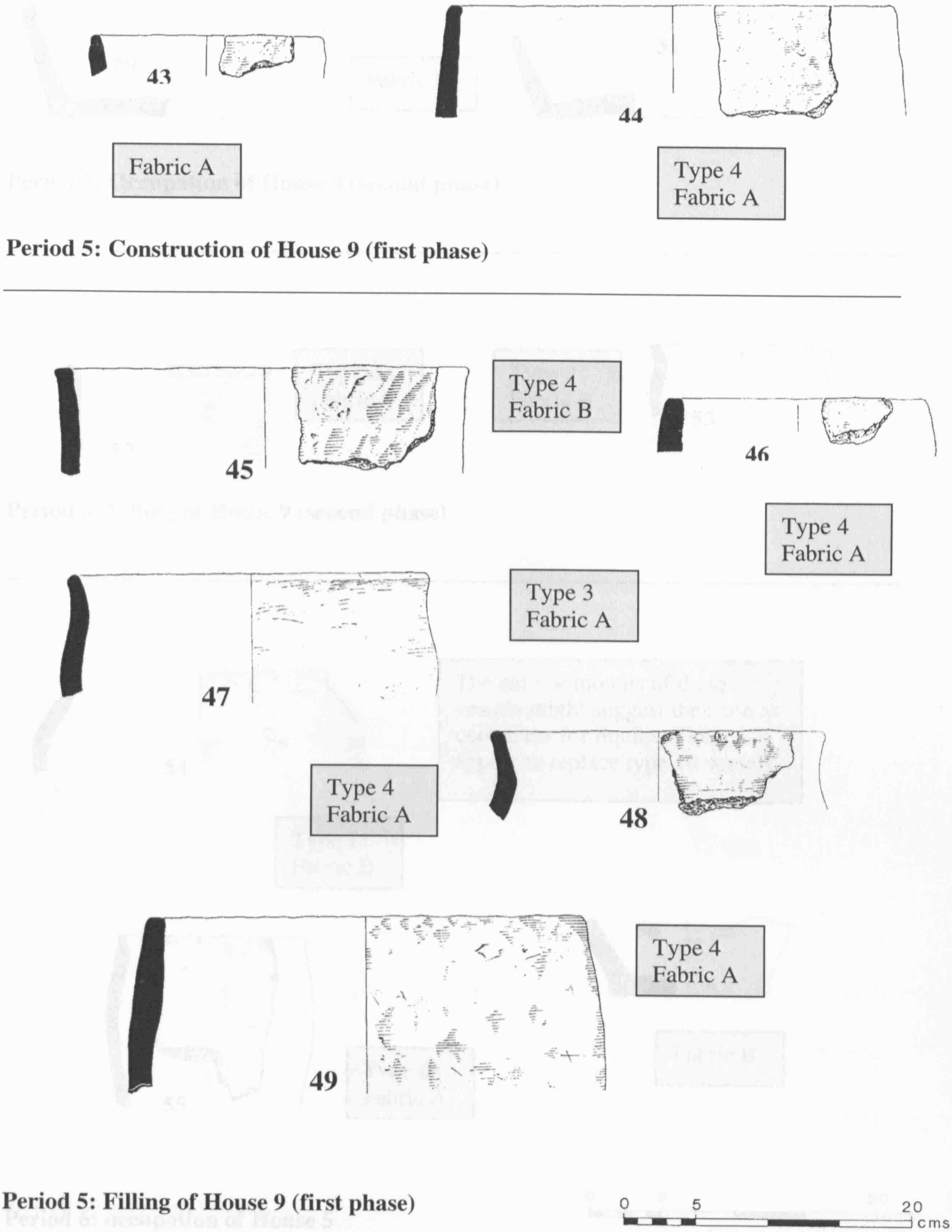
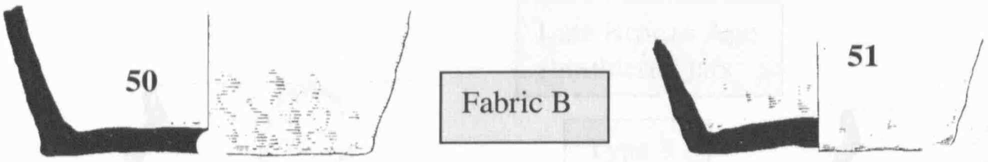
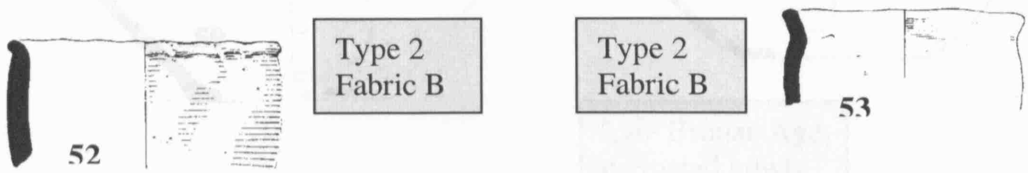


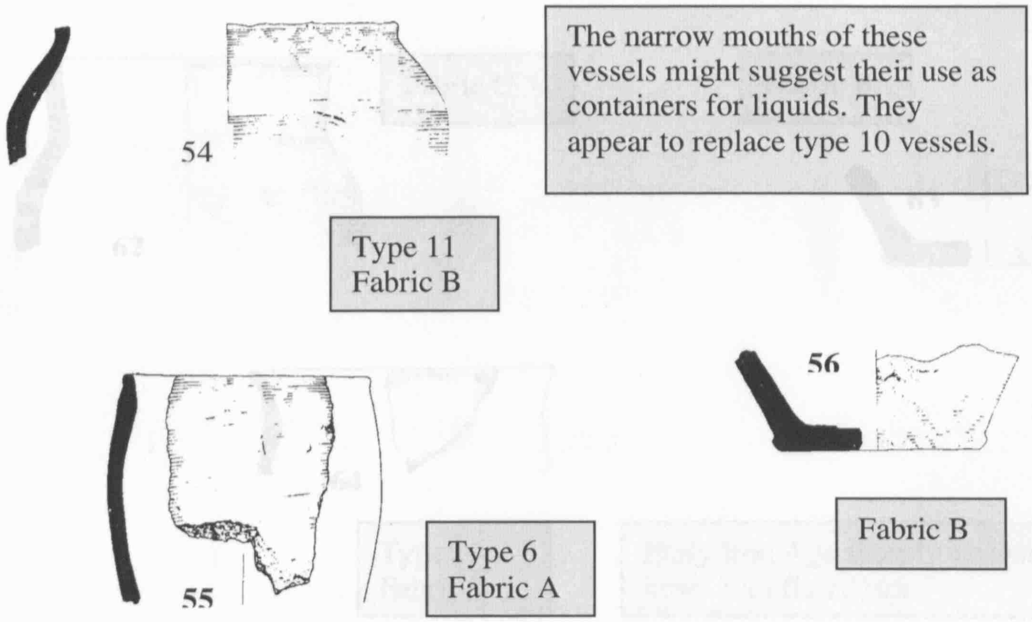
Fig.5.10 Selected examples of pottery from the eastern settlement area of Nornour



Period 5: Occupation of House 9 (second phase)



Period 5: Filling of House 9 (second phase)



Period 6: occupation of House 5

Fig. 5.11 Selected examples of pottery from the eastern settlement area of Nornour

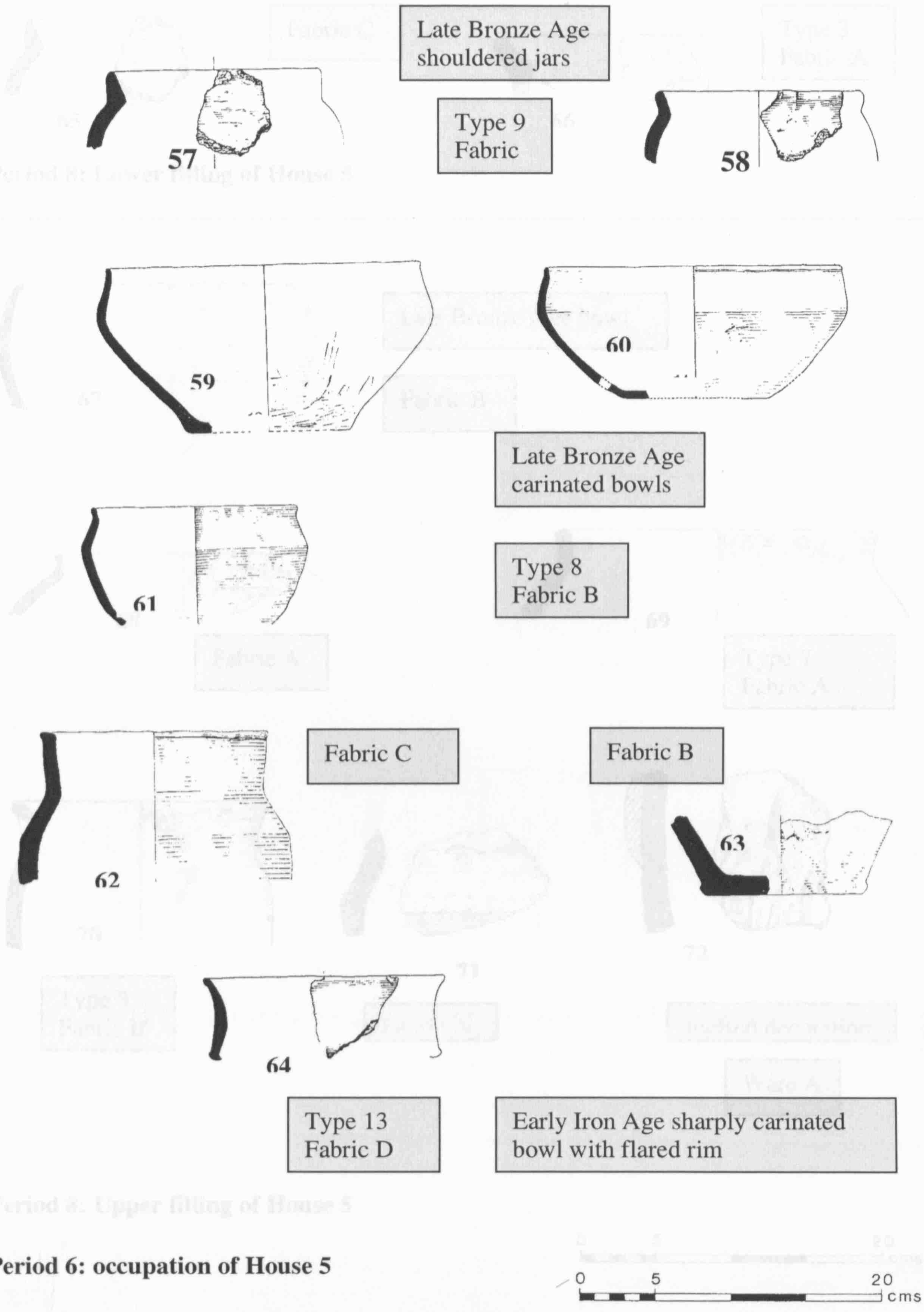
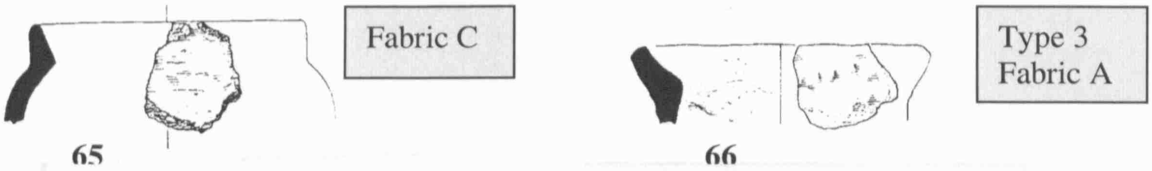
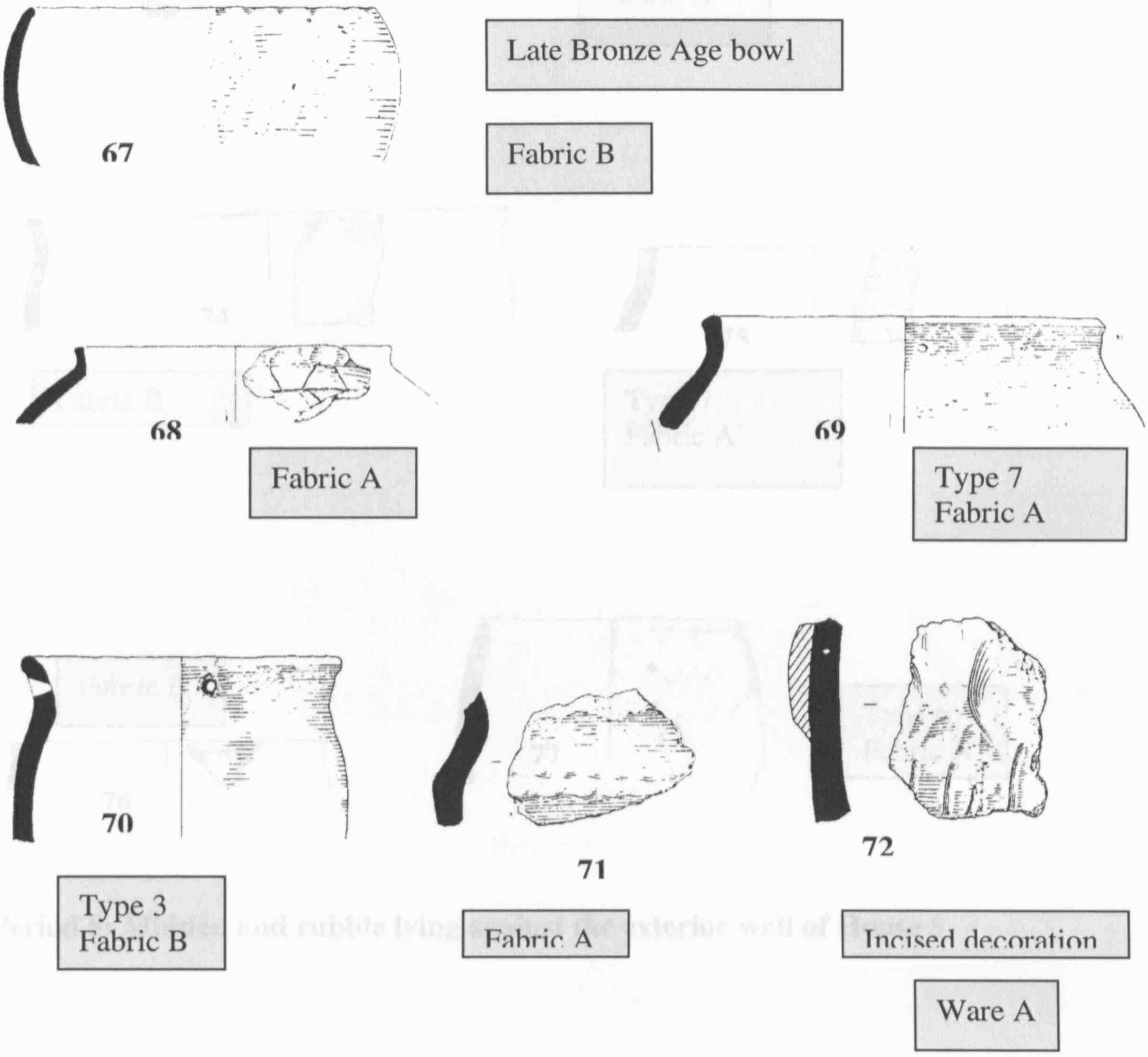


Fig. 5.12 Selected examples of pottery from the eastern settlement area of Nornour

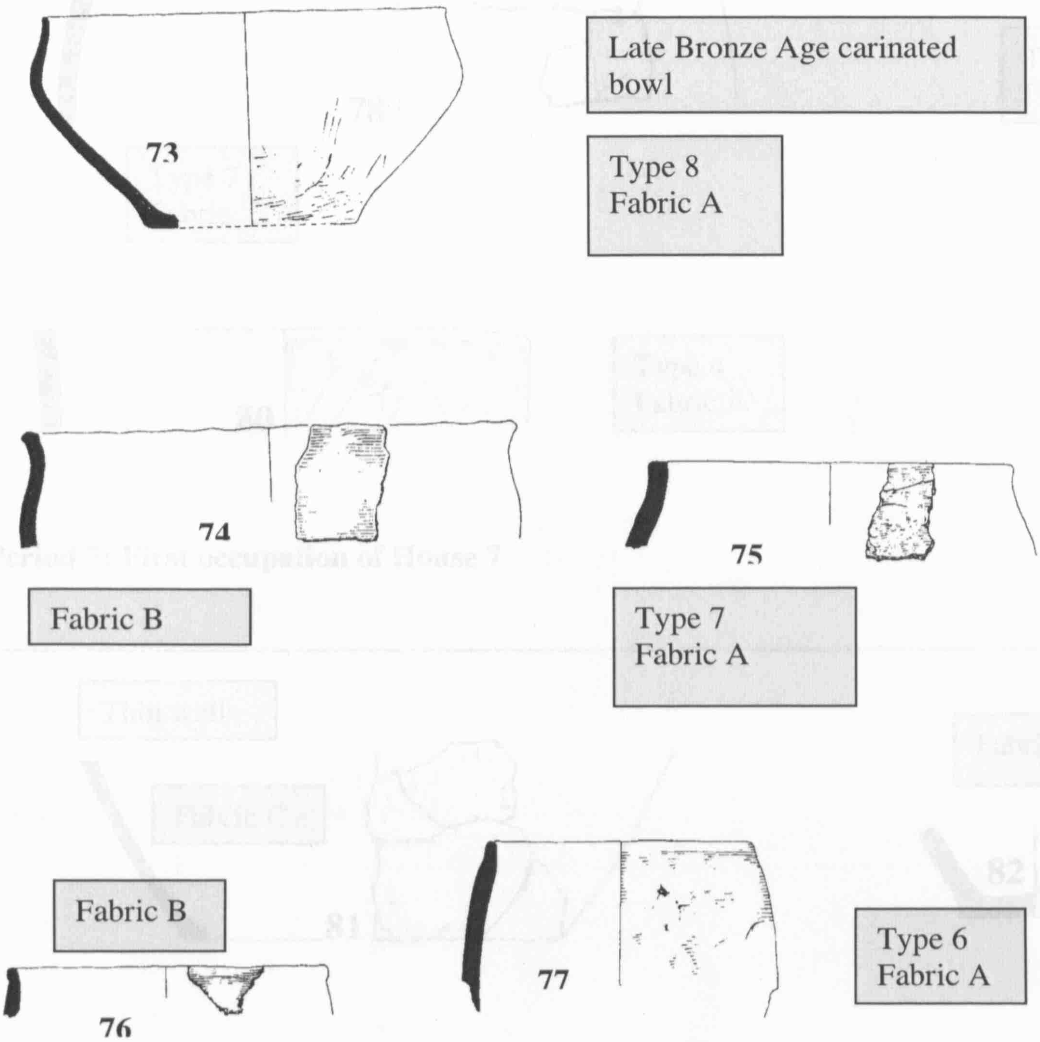


Period 8: Lower filling of House 5



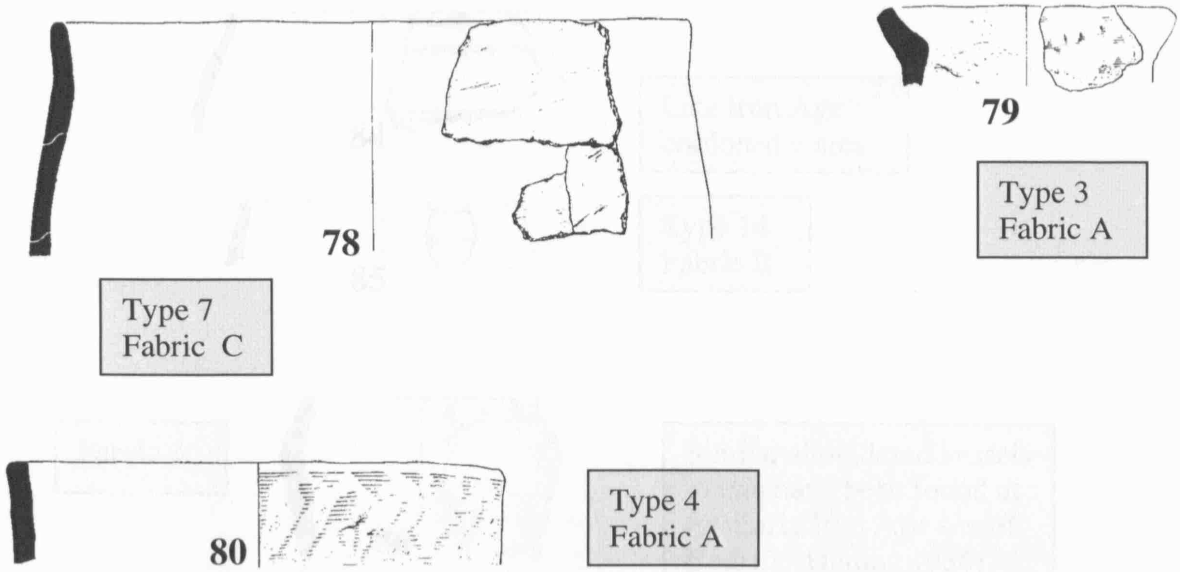
Period 8: Upper filling of House 5

Fig. 5.13 Selected examples of pottery from the eastern settlement area of Nornour

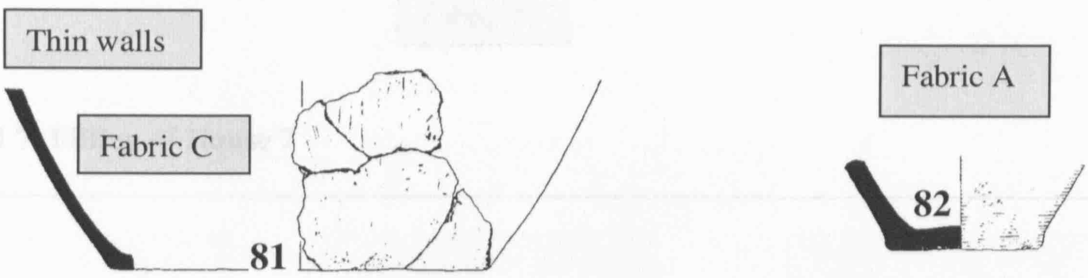


Period 5: Midden and rubble lying against the exterior wall of House 5

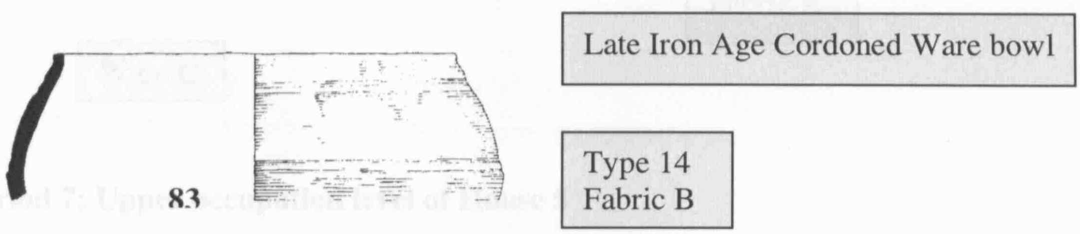
Fig. 5.14 Selected examples of pottery from the eastern settlement area of Nornour



Period 7: First occupation of House 7

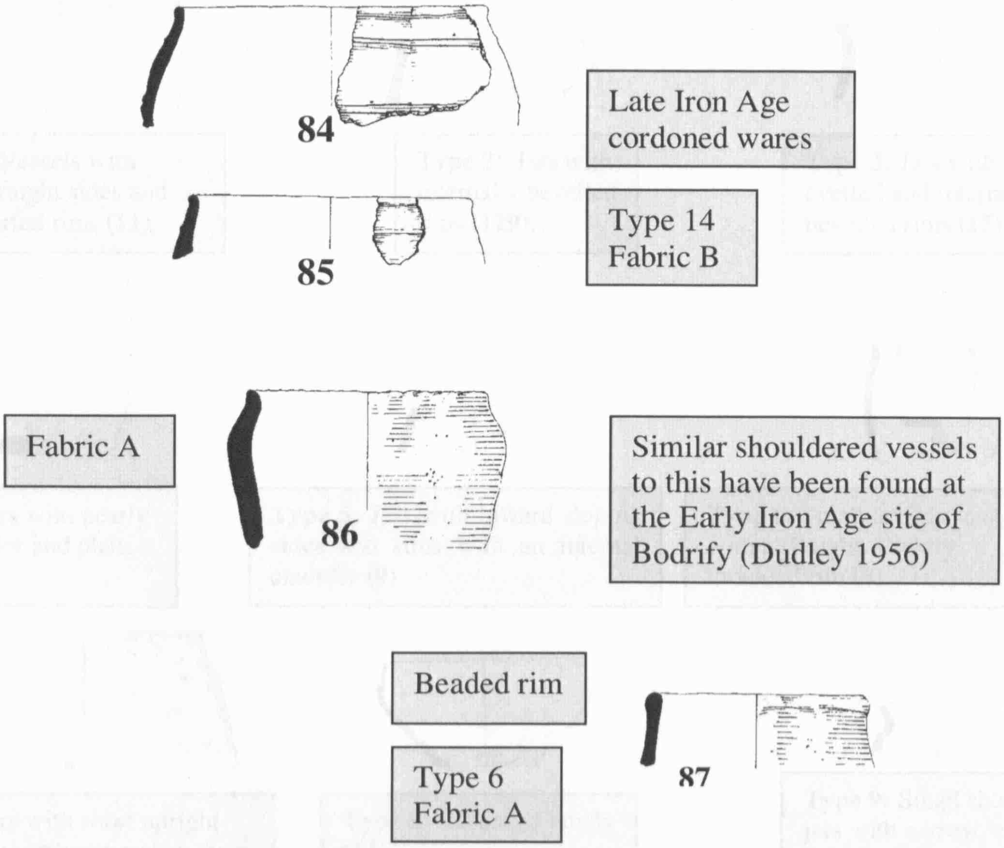


Period 7: Rebuild of internal wall of House 7

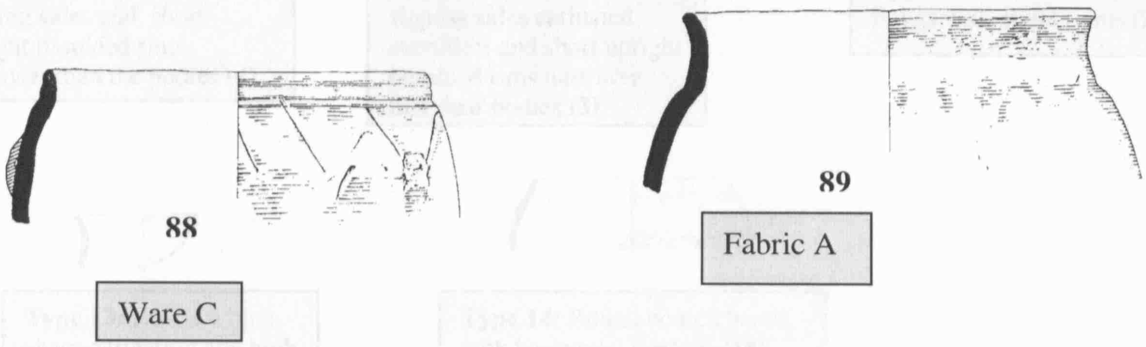


Period 7: Second occupation of House 7

Fig. 5.15 Selected examples of pottery from the eastern settlement area of Nornour



Period 7: Filling of House 7

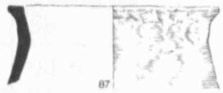


Period 7: Upper occupation level of House 5

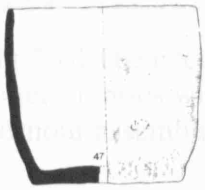
Fig. 5.16 Selected examples of pottery from the eastern settlement area of Nornour

Type 1: Vessels with nearly straight sides and wide everted rims **(11)**.

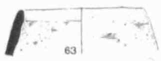
Type 2: Jars with internally bevelled rims **(129)**.



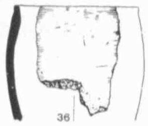
Type 3: Jars with narrow everted and internally bevelled rims **(13)**.



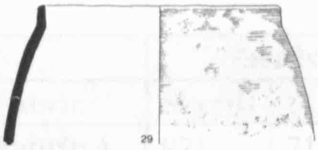
Type 4: Jars with nearly straight sides and plain rims **(226)**.



Type 5: Jars with inward sloping sides and rims with an internal chamfer **(9)**.



Type 6: Small upright jars with a straight, slightly moulded rim **(9)**.



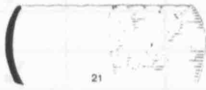
Type 7: Jars with short upright moulded rims narrower than their bodies **(40)**.

Type 8: Carinated bowls **(11)**.

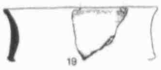
Type 9: Small shouldered jars with narrow, everted rims **(11)**.

Type 10: Jars with inward sloping sides and short upright moulded rims narrower than the bodies **(4)**.

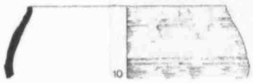
Type 11: Jars with inward sloping sides carinated shoulders and short upright moulded rims narrower that their bodies **(3)**.



Type 12: Round bodied bowls with simple rims **(2)**.



Type 13: Bowls with a sharp carination and high flaring rims **(1)**.



Type 14: Round bodied bowls with horizontal cordons **(18)**.

Fig 5.17 Vessel types identified from the eastern settlement of Nornour, St Agnes
Numbers in brackets represent the total of sherds attributable to individual vessel types (total sherds 487).
(Compiled from:: Butcher 1978).

	Sherds	
Fabric	**No.**	**%**
Fabric A	3992	87.7
Fabric B	534	11.7
Fabric C	25	0.5
Fabric D	1	0.1
Total	**4552**	

Fig.5.18 The occurrence of pottery fabrics within the Nornour assemblage

	Sherds	
Fabric	**Sherds**	**%**
Fabric A	3021	94.6
Fabric B	169	5.3
Fabric C	3	0.01
Fabric D	-	
Total	**3193**	

Fig.5.19 The occurrence of pottery fabric within periods 1-5 at Nornour

	Sherds	
Fabric	**Sherds**	**%**
Fabric A	971	71.4
Fabric B	365	26.9
Fabric C	33	1.6
Fabric D	1	0.1
Total	**1359**	

Fig.20 The occurrence of pottery fabric within Periods 6-7 at Nornour

	Fabrics			
Type	**A**	**B**	**C**	**D**
Type 1	✓			
Type 2	✓	✓		
Type 3	✓			
Type 4	✓	✓		
Type 5	✓			
Type 6	✓	✓		
Type 7	✓	✓	✓	
Type 8		✓		
Type 9	✓	✓	✓	
Type 10	✓	✓		
Type 11		✓		
Type 12		✓		
Type 13				✓
Type 14		✓		

Fig.5.21 A comparison between vessel type and fabric

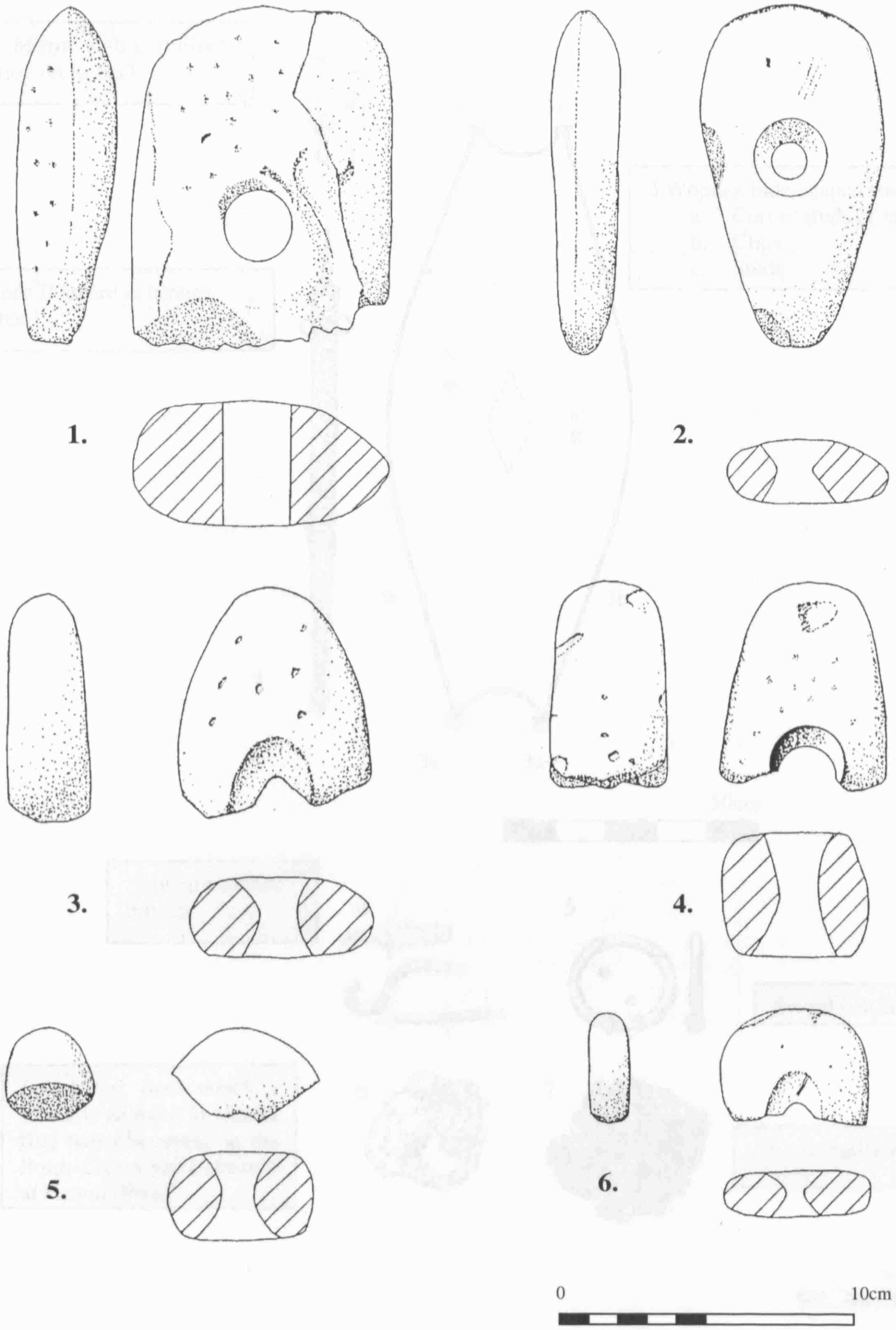


Fig. 5.22 A selection of Late Neolithic/Early Bronze Age stone artefacts from the Isles of Scilly (Source: Ransom 1984)

1. Shaft-holed adze from English Island Carn, St Martin's (Clough and Cummins 1988)
2. Shaft-holed adze, Normandy Farm, St Mary's (Hencken 1932)
3. Shaft-holed adze, Gugh (Hencken 1932, Ransom)
4. Battle-axe, Normandy Farm, St Mary's (Clough and Cummins 1988)
5. Mace-head, Bryher (Ashbee 1974, Ransom 1984)
6. 6. Mace-Head (Ashbee 1974)

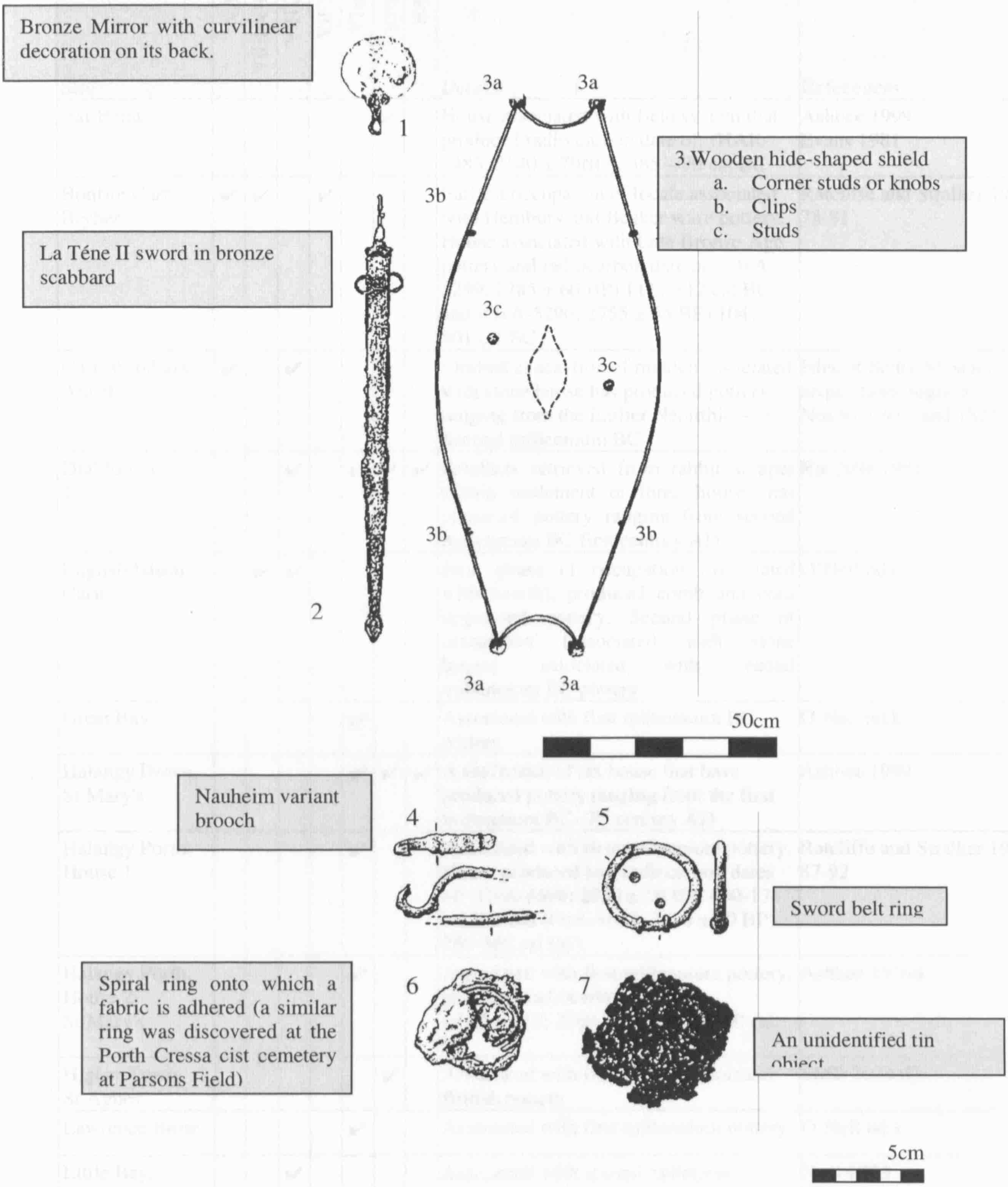


Fig. 5.23 Artefacts recovered from a crouched inhumation burial within a Porth Cressa cist at Hillside Farm, Bryher.
(Reproduced courtesy of The Cornwall Archaeology Unit and English Heritage)

Site	EN	LN/EBA	MBA	LBA	EIA	LIA	RB	Details	References
Bar Point						✔		House associated with field system that produced radio-carbon date of: (HAR-3483; 2140 ± 70BO), 385 – 70 cal BC	Ashbee 1999 Evans 1981
Bonfire Carn, Bryher	✔	✔		✔				Earliest occupation of locale associated with Hembury and Beaker ware pottery. House associated with Late Bronze Age pottery and radiocarbon date of: (OxA-5289; 2785 ± 60 BP) 1111-812 cal BC and (OxA-5290; 2755 ± 65 BP) 1047-801 cal BC	Ratcliffe and Stralker 1996, 78-81
Carn Windlass, Annet	✔		✔					Limited exacavtion of midden associated with stone house has produced pottery ranging from the Earlier Neolithic – Second millennium BC	Isles of Scilly Museum acquisitions register: Nos.910, 911 and 1824
Dial Rocks, Tresco			✔		✔	✔	✔	Artefacts retrieved from rabbit scrapes within settlement of three houses has produced pottery ranging from second millennium BC-first century AD	Ratcliffe 1991, 75
English Island Carn		✔	✔					First phase of occupation (associated with hearth), produced comb and cord impressed pottery. Second phase of occupation (associated with stone house), associated with second millennium BC pottery.	O'Neil nd.h
Great Bay					✔			Associated with first millennium BC pottery	O'Neil nd.k
Halangy Down, St Mary's					✔	✔	✔	A settlement of six house that have produced pottery ranging from the first millennium BC- 2nd century AD	Ashbee 1999
Halangy Porth, House 1					✔			Associated with first millennium pottery. House produced two radiocarbon dates of: (OxA-4696; 2250 ± 50 BP) 400-174 cal BC and (OxA-4697; 2390 ± 50 BP) 760-365 cal BC).	Ratcliffe and Stralker 1996, 87-92
Halangy Porth, House 2 St Mary's					✔			Associated with first millennium pottery, produced radiocarbon date of: (HAR-1313; 2260 ± 90 BP) 518-60 cal BC	Ashbee 1976d
Higher Town, St Agnes						✔		Associated with Iron Age and Romano-British pottery	SMR 7034.02
Lawrence Brow					✔			Associated with first millennium pottery	O'Neil nd.k
Little Bay, House A			✔					Associated with second millenium pottery	Neal 1983 O'Neil nd.i
Little Bay, Ho use C			✔					Associated with second millennium pottery	Neal 1983

Fig. 6.1 The dating of prehistoric Scillonian houses.
Key: EN=Earlier Neolithic; LN/EBA=Later Neolithic Early Bronze Age; MBA=Middle Bronze Age; LBA= Late Bronze Age; EIA=Earlier Iron Age; LIA Later Iron Age; RB=Romano-British; SMR=Cornwall Site and Monument Record
(Continued overleaf).

Site	EN	LN/EBA	MBA	LBA	EIA	LIA	RB	Details	References
Little Bay, House B (Phase 1)		✔						Pit below stone house produced comb impressed pottery. Radiocarbon date taken from heath sealing pit produced a date of: (HAR-3490 ± 100 BP) 2124 – 1525 cal BC).	Neal 1983
Little Bay, House B (Phase 2)			✔					Second millennium pottery. House produced radiocarbon dates of: (HAR-1726; 2780 – 80 BP) 1206 – 800 cal BC (HAR-1715; 3190 ± 110 BP) 1735 – 1132 cal BC	Neal 1983
Little Bay, House D			✔					Associated with second millennium pottery	Butcher 1973; Neal 1983
May's Hill (phase 1) St Martin's			✔					Pit filled with a midden deposit located below later house contained second millennium pottery	O'Neil nd.d; Thomas 1983
Neck of Arthur, Eastern Isles			✔					Associated with second millennium pottery	SMR ISM
Nornour, House 10 (phase 1)			✔					Associated with second millennium pottery	Butcher 1978
Nornour, House 11			✔					Associated with second millennium pottery	Butcher 1978
Nornour, House 10 (phase 2)			✔					Associated with second millennium pottery	Butcher 1978
Nornour, House 6			✔					Associated with second millennium pottery. Magnetic dates (SC 40-45 and 50-53) taken from hearths in house produced a date range of X	Butcher 1978
Nornour, House 9			✔					Associated with second millennium pottery. Radiocarbon dates taken from this house have produced dates of: (HAR-2990 ± 100 BP) 1487 – 920 cal BC (HAR-460 ± 70 BP) 1430 – 1020 cal BC	Butcher 1978
Nornour, House 5			✔	✔	✔	✔		House has produced second and first millennium pottery. Radiocarbon date from house produced a date of: (HAR-240; 2690 ± 90 BP) 1015-600 cal BC	Butcher 1978
Nornour, House 1			✔		✔	✔	✔	Produced first millennium pottery Radiocarbon date taken from the connecting passage between house 1 and house 2 produced date of: (HAR-239; 3260 ± 280 BP) 2283-830 cal BC	Butcher 1976; Dudley 1967
Nornour, House 2					✔	✔	✔	Produced first millennium pottery	Butcher 1976, Dudley 1967

Fig.6.1 (cont.) The dating of prehistoric Scillonian houses.
Key: EN=Earlier Neolithic; LN/EBA=Later Neolithic/Early Bronze Age; MBA=Middle Bronze Age; LBA= Late Bronze Age; EIA=Earlier Iron Age; LIA Later Iron Age; RB=Romano-British; SMR=Cornwall Site and Monument Record.
(Continued overleaf)

Site	EN	LN/EBA	MBA	LBA	EIA	LIA	RB	Details	References
Oliver's Battery, Tresco			✔					Associated with second millennium pottery	Ratcliffe 1991, 74
Par Beach, Site A						✔	✔	Associated with pottery from the fist and second centuries AD	O'Neil nd.a
Par Beach, Site E			✔					Associated with second millennium pottery	O'Neil nd.b
Par Beach, Site F					✔			Associated with first millennium pottery	O'Neil nd.c
Periglis, St Agnes								Midden associated with first millennium pottery	Gray 1972
Perpitch			✔					House associated with second millennium pottery	O'Neil nd.g
Porth Cressa, St Mary's			✔					House associated with second millennium pottery. Radiocarbon dates from house have produced dates of: (OxA-4701; 3165 ± 55 BP) 1524-1316 cal BC (GU-5413; 3250 ± 50 BP) 1680-1413 cal BC	Ratcliffe and Stralker 1996, 74-77
Porth Killier, St Agnes			✔					House associated with second millennium pottery. Radiocarbon dates from house have produced dates of: 1600-1265 cal BC (OxA-3648; 3170 ± 65 BP) 1682-1320 cal BC (OxA-3647; 3220 ± 60 BP)	Ratcliffe and Stralker 1996, 62-73
Poynter's Garden, St Mary's							✔	Associated with metalwork and pottery from first century BC and first century AD	Gray 1972 O'Neal nd.g
Tregear's Porth, St Mary's			✔					Associated with second millennium BC pottery	SMR: 7463
West Porth, Samson				✔				House associated with Late Bronze Age pottery. Radiocarbon dates from house have produced dates of: 826-410 cal BC (OxA-3650; 2545 ± 65 BP) 831-414 cal BC (OxA-3651; 2570 ± 65 BP)	Ratcliffe and Stralker 1996; 82-87

Fig. 6.1 (cont.).The dating of prehistoric Scillonian houses.
Key: EN=Earlier Neolithic; LN/EBA=Early Bronze Age; MBA=Middle Bronze Age; LBA= Late Bronze Age; EIA=Earlier Iron Age; LIA Later Iron Age; RB=Romano-British; SMR=Cornwall Site and Monument Record.

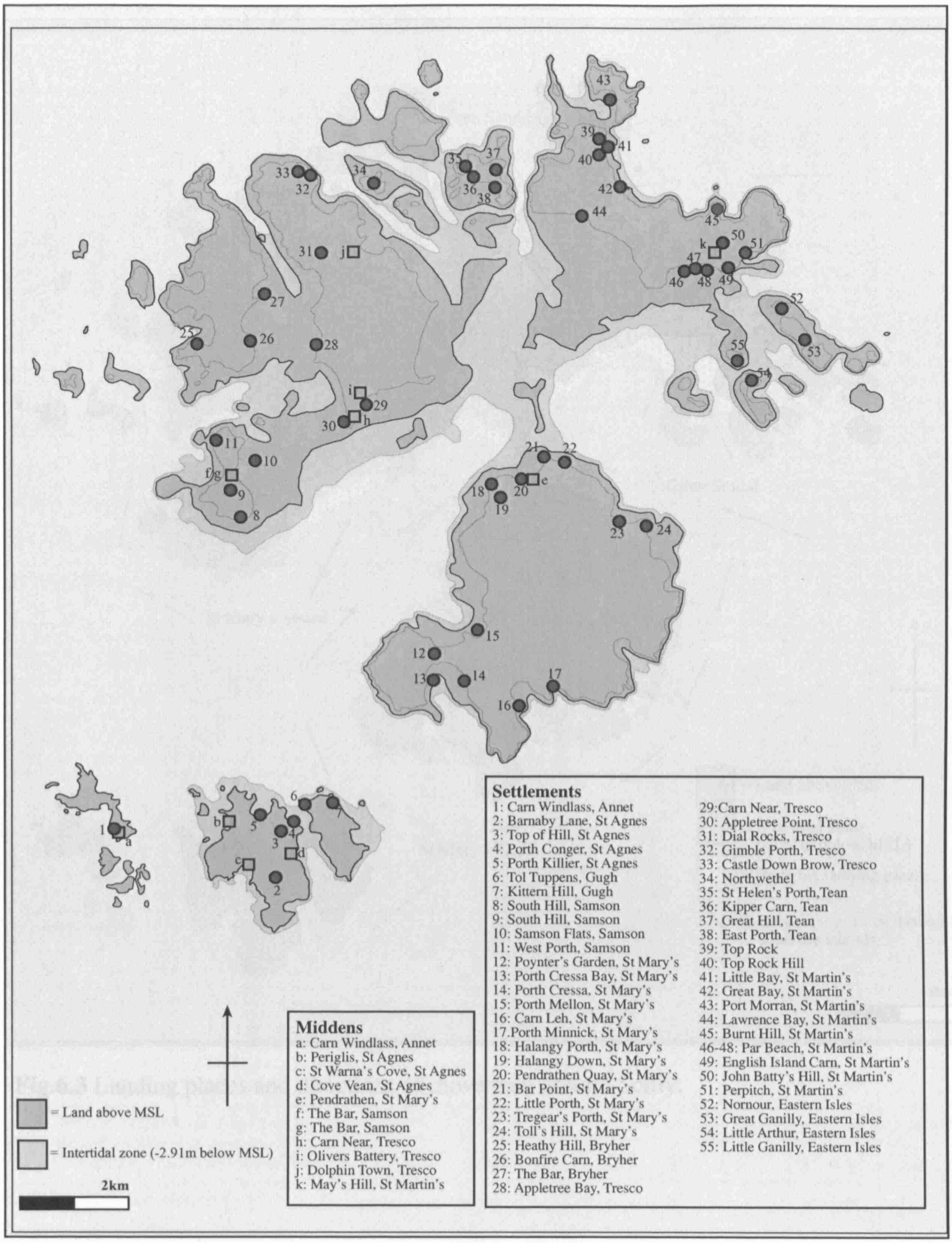


Fig.6.2 The distribution of prehistoric settlement on Scilly

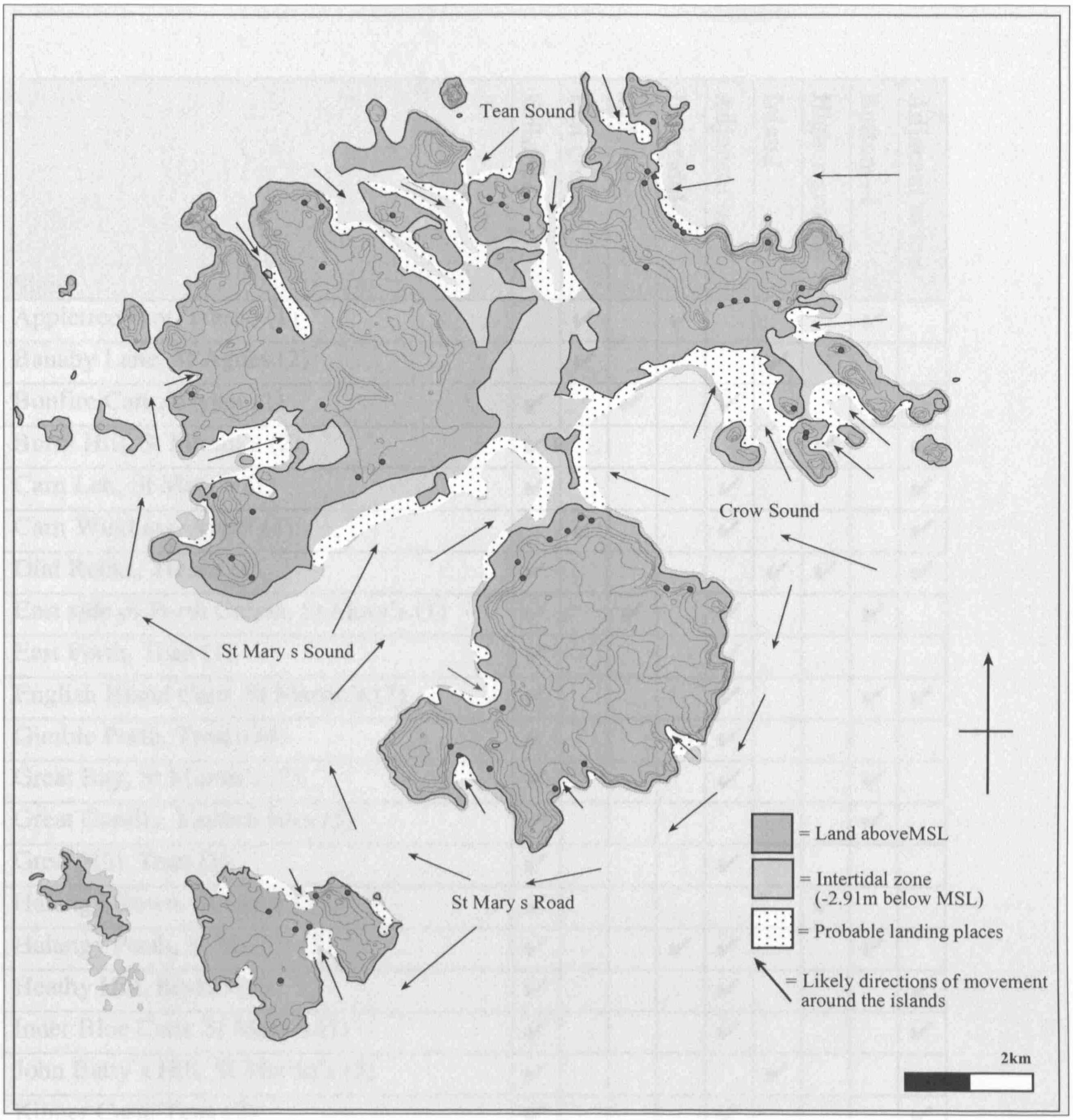


Fig.6.3 Landing places and directions of movement around Scilly.

Sites	Hillslope	Flat ground	Cliff-face	Intertidal	Adjacent to	Inland	Higher ground	Bottom of	Adjacent to tor
Appletree Bay, Tresco (1)		✔		✔				✔	
Banaby Lane, St Agnes (2)		✔				✔			
Bonfire Carn, Bryher (1)	✔		✔		✔				
Burnt Hill, St Martin's (2)	✔						✔		✔
Carn Leh, St Mary's (1)	✔				✔				✔
Carn Windlass, Annet (1)		✔			✔				✔
Dial Rocks, Tresco (4)	✔					✔	✔		✔
East side of Porth Cressa, St Mary's (1)	✔		✔		✔			✔	
East Porth, Tean (1)	✔				✔				
English Island Carn, St Martin's (2)	✔				✔			✔	✔
Gimble Porth, Tresco (4)	✔				✔				
Great Bay, St Martin's (2)	✔				✔			✔	
Great Ganilly, Eastern Isles (1)	✔							✔	
Great Hill, Tean (1)	✔				✔				
Halangy Down, St Mary's (?)	✔						✔		
Halangy Porth, St Mary's (2)	✔			✔	✔			✔	
Heathy Hill, Bryher (2)	✔				✔				✔
Inner Blue Carn, St Mary's (1)	✔				✔				✔
John Batty's Hill, St Martin's (3)	✔					✔			
Kipper Carn, Tean (2)	✔				✔				✔
Kittern Hill, Gugh (4)	✔				✔			✔	✔
Lawrence Brow, St Martin's (1)	✔			✔	✔			✔	✔
Little Arthur, Eastern Isles (3)	✔				✔			✔	✔
Little Bay, St Martin's (5)	✔				✔			✔	✔
Little Porth, St Mary's (1)		✔		✔	✔			✔	
Nornour, Eastern Isles (12)	✔				✔			✔	✔

Fig.6.4 The landscape setting of prehistoric Scillonian settlement
(Continued overleaf)

Sites	Hillslope	Flat ground	Cliff-face	Intertidal	Adjacent to	Inland	Higher ground	Bottom of	Adjacent to tor
North Hill, Samson (4)	✔				✔			✔	✔
North of Tregarthen's Hill, Tresco (10)	✔					✔		✔	✔
Northwethel (6)		✔			✔				✔
Par Beach, St Martin's (3)		✔		✔	✔				
Pendrathen, St Mary's (3)	✔		✔	✔	✔			✔	
Pendrathen Quay, St Mary's (1)		✔			✔			✔	
Perpitch, St Martin's (1)	✔				✔			✔	
Porth Conger, St Agnes (1)	✔				✔			✔	
Porth Cressa Bay, St Mary's (1)	✔			✔	✔			✔	
Porth Killier, St Agnes (3)		✔	✔		✔				
Porth Mellon, St Mary's (1)		✔		✔	✔			✔	✔
Poynter's Garden, St Mary's (1)	✔				✔			✔	
Samson Flats, Samson (2)		✔		✔	✔				
St Helen's Porth, Tean (2)		✔		✔	✔				✔
The Bar, Bryher (2)		✔		✔					
Tol Tuppens, Gugh (3)	✔				✔			✔	✔
Toll's Porth, St Mary's (1)	✔				✔		✔		
Top of the Hill, Bryher (1)	✔				✔		✔		✔
Top Rock Hill, St Martin's (1)	✔				✔		✔		✔
Tregear's Porth, St Mary's (1)	✔				✔		✔		✔
West Porth, Samson (1)			✔		✔			✔	

Fig.6.4 (cont.). The landscape setting of prehistoric Scillonian settlement

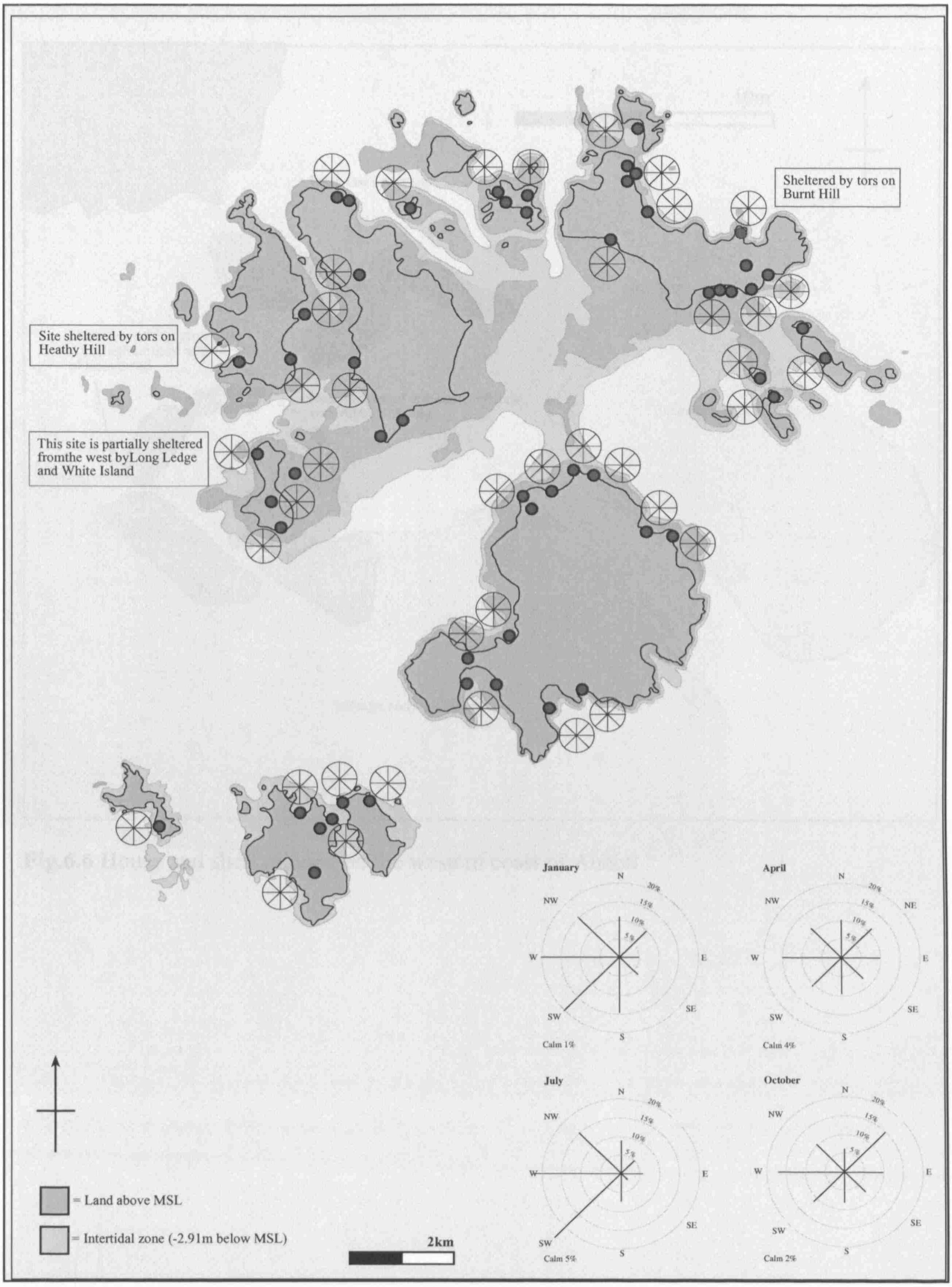


Fig. 6.5 The relative exposure of prehistoric settlement.
Insert shows average annual wind patterns for Scilly averaged out over a 50year period (source of data Brandon 1999).

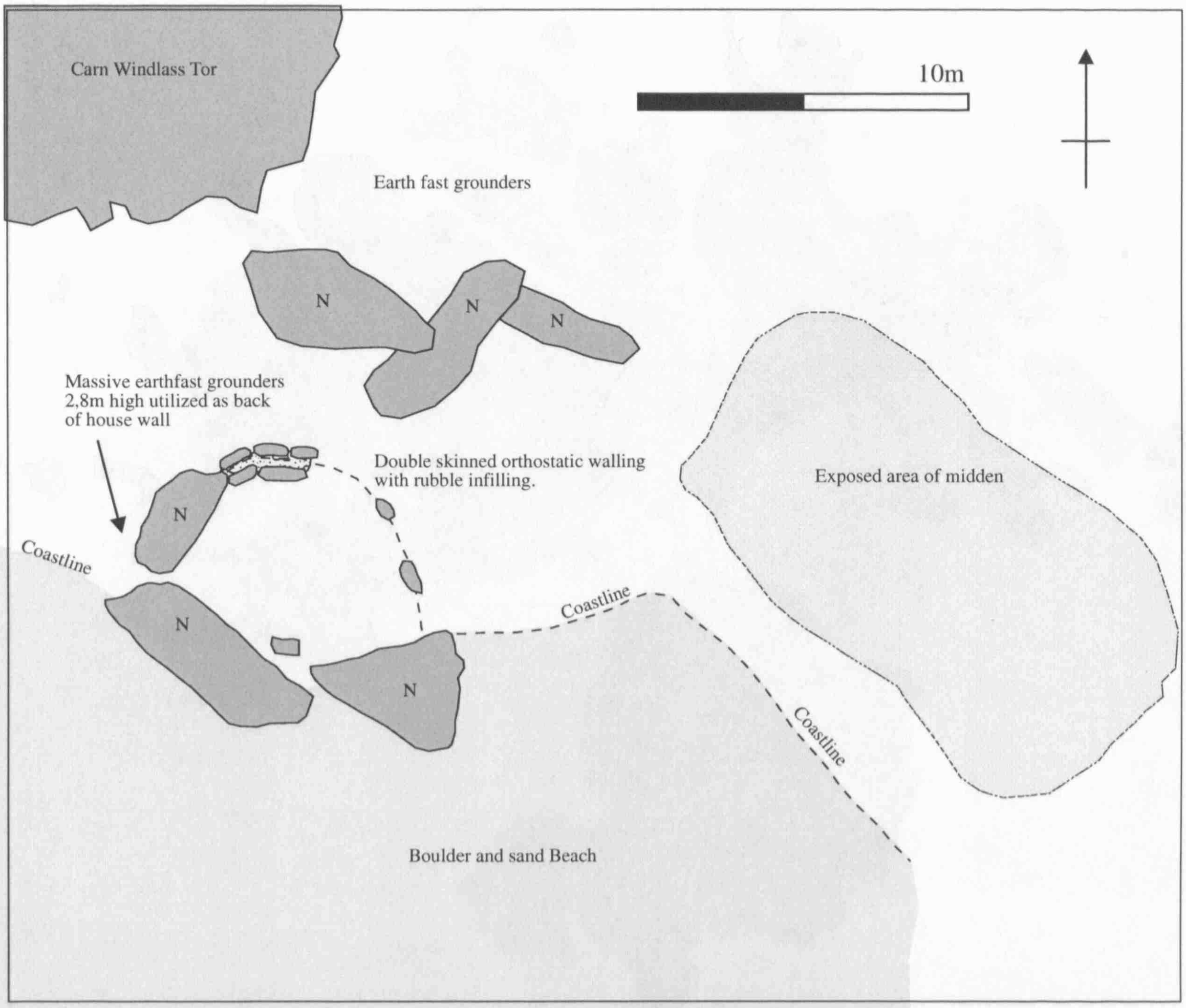


Fig.6.6 House and shell midden on the western coast of Annett

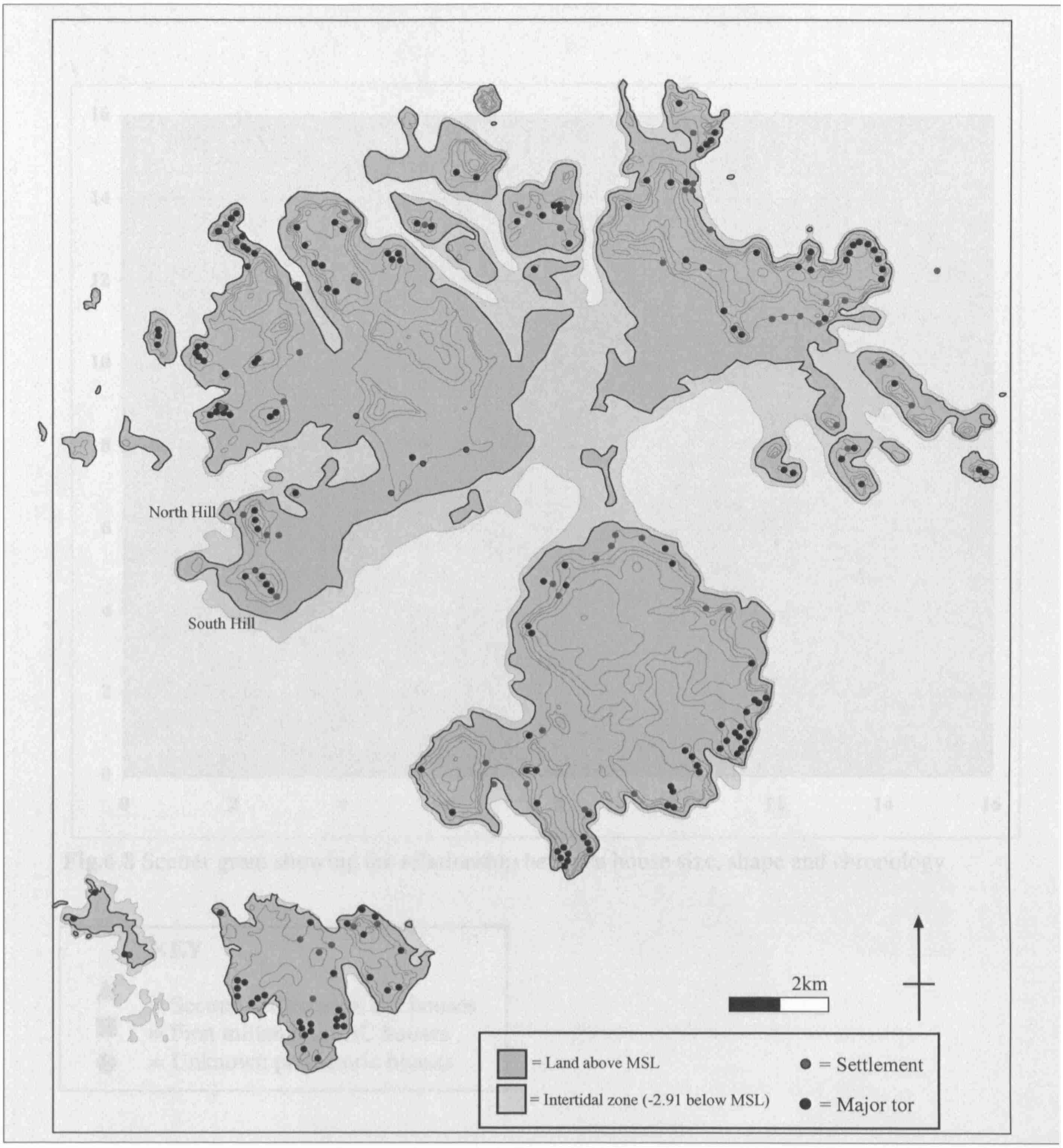


Fig.6.7 A comparison between the distribution of 'major tors and prehistoric settlement (Source of geological data: Mitchel and Orme 1967 and Scourse 1986)

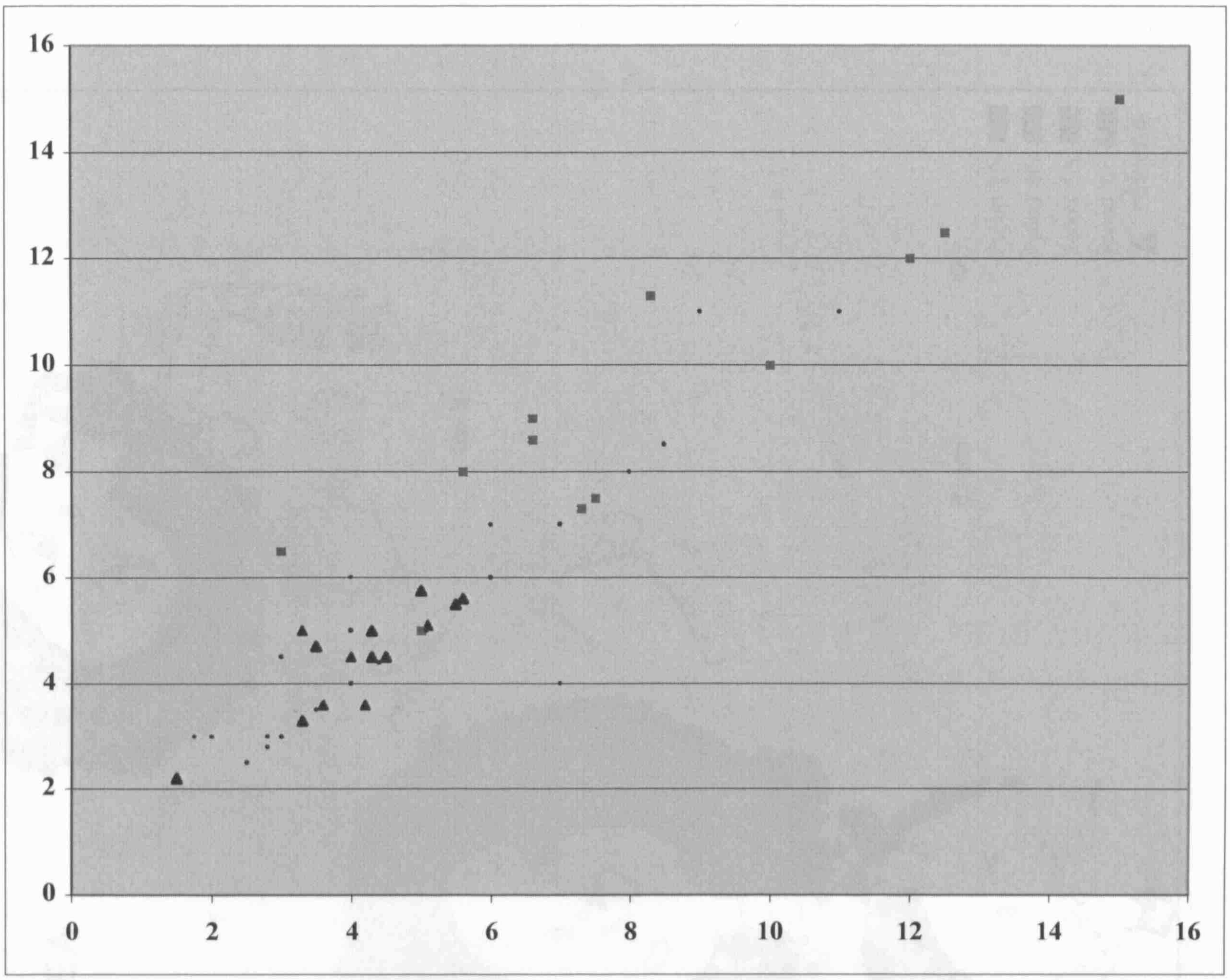


Fig.6.8 Scatter gram showing the relationship between house size, shape and chronology

KEY

▲ = Second millennium BC houses
■ = First millennium BC houses
● = Unknown prehistoric houses

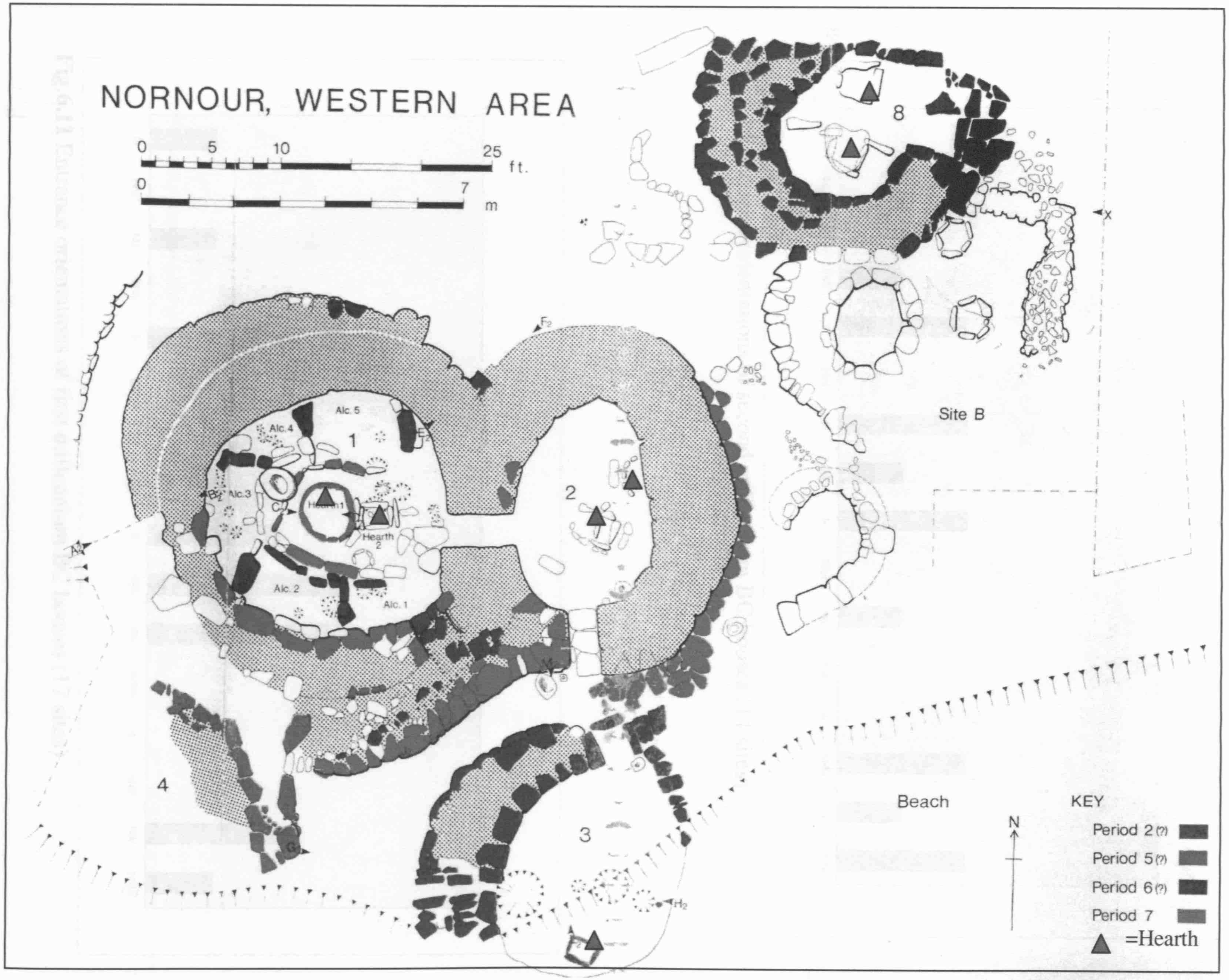


Fig.6.9 The western settlement area of Nornour

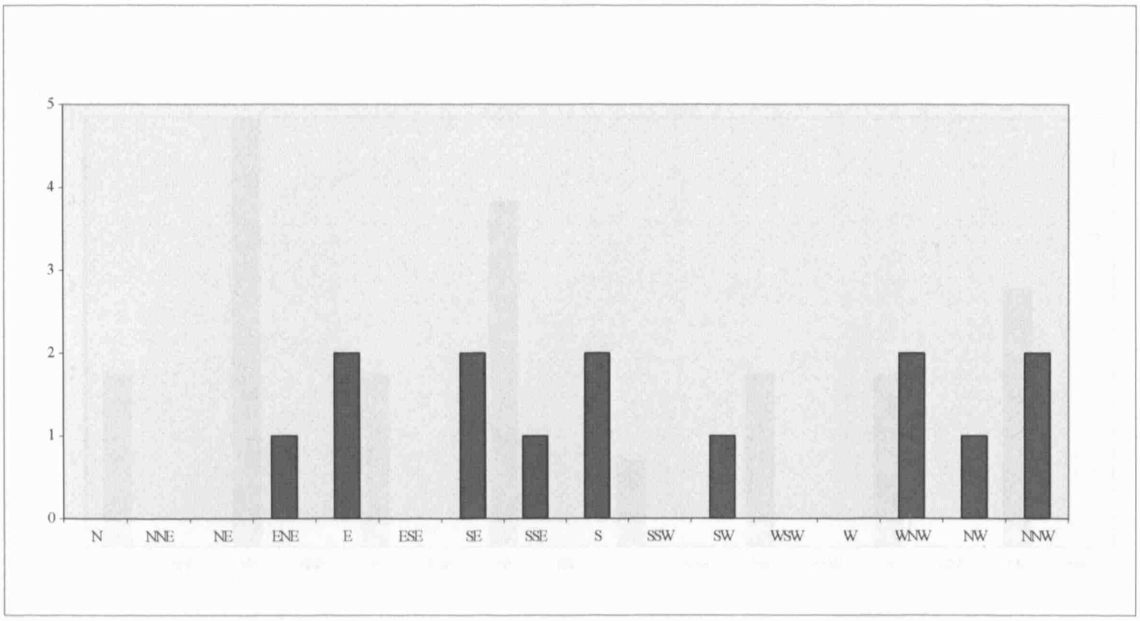


Fig.6.10 Entrance orientations of second millennium BC houses (14 sites)

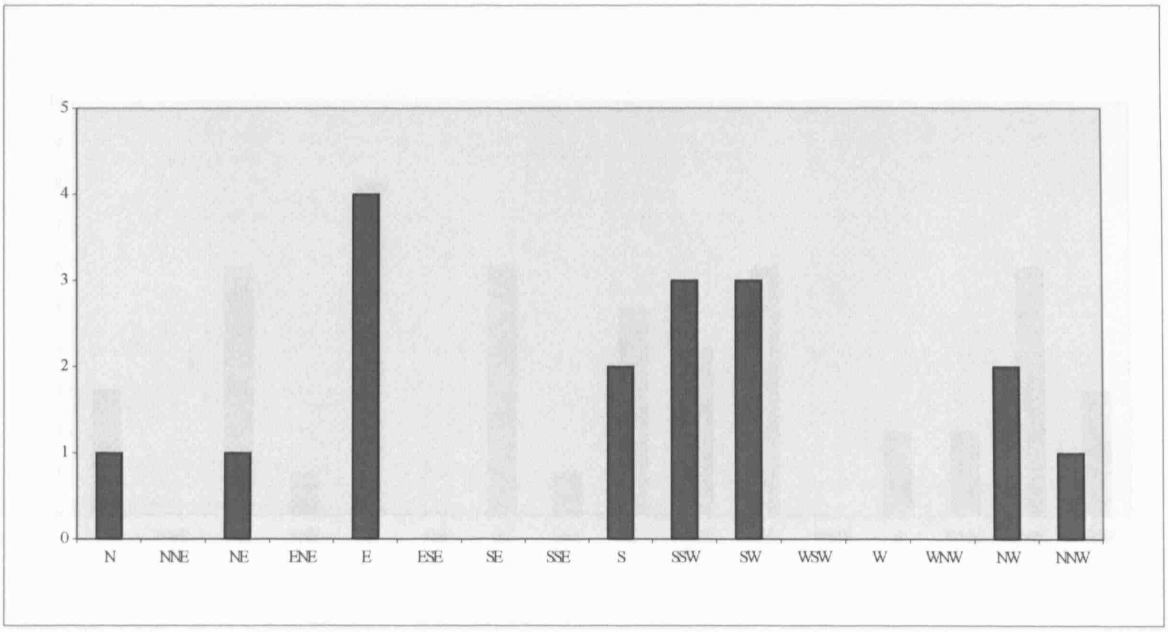


Fig.6.11 Entrance orientations of first millennium BC houses (17 sites)

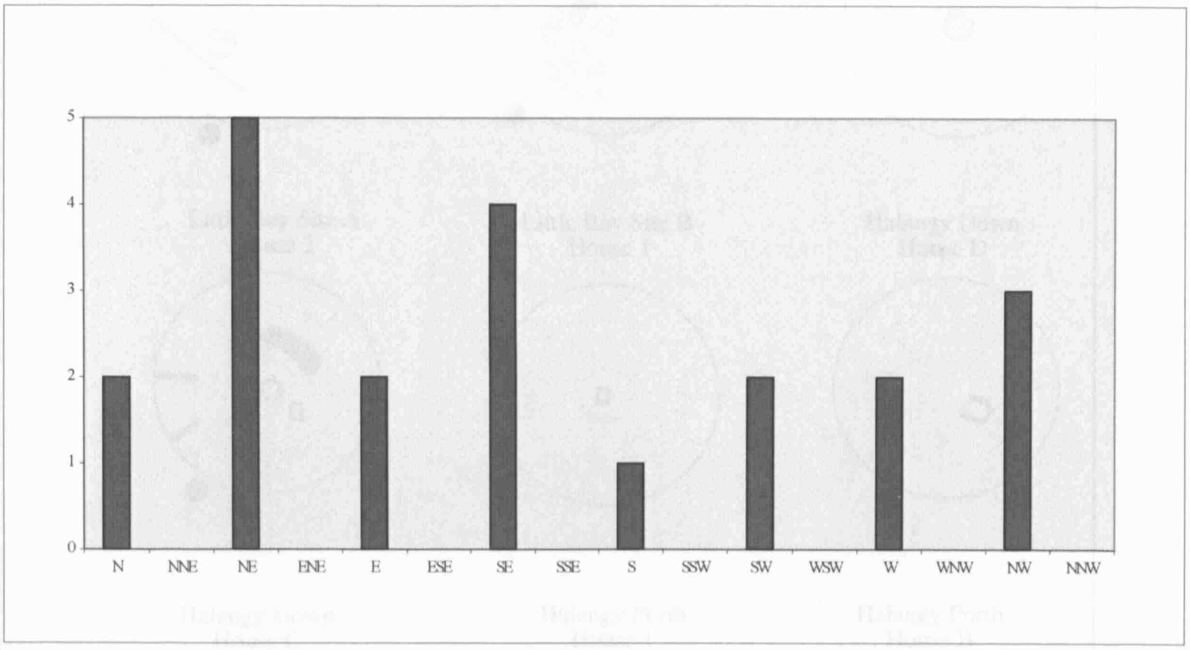


Fig.6.12 Entrance orientations of prehistoric houses of unknown date (21 sites)

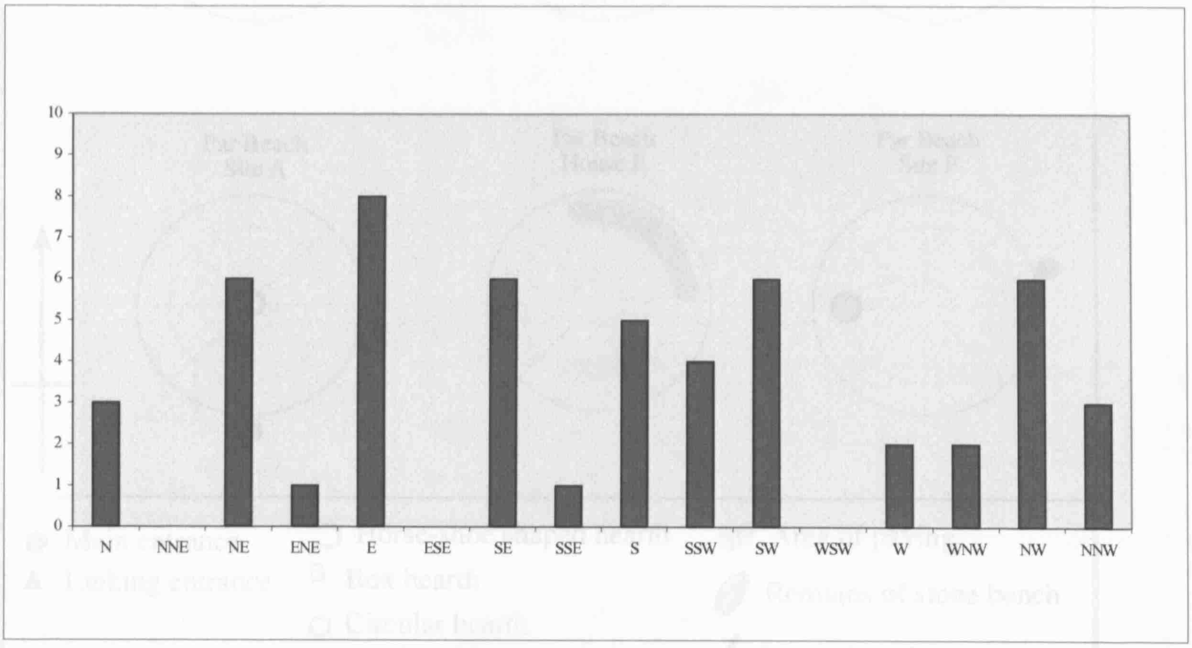


Fig.6.13 Entrance orientations of all prehistoric houses (52 sites)

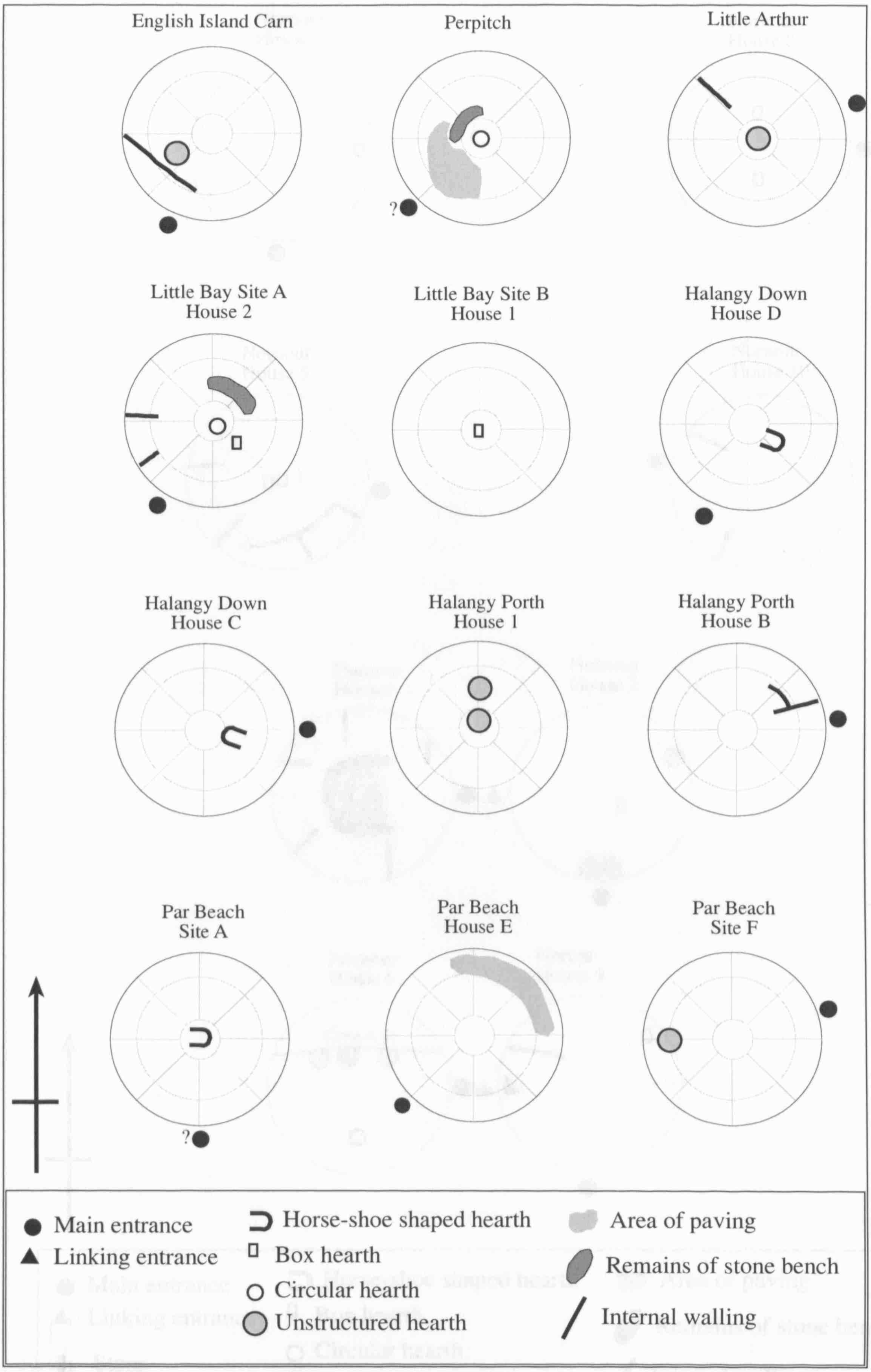


Fig.6.14 The placement of internal features within prehistoric houses (Continued overleaf)

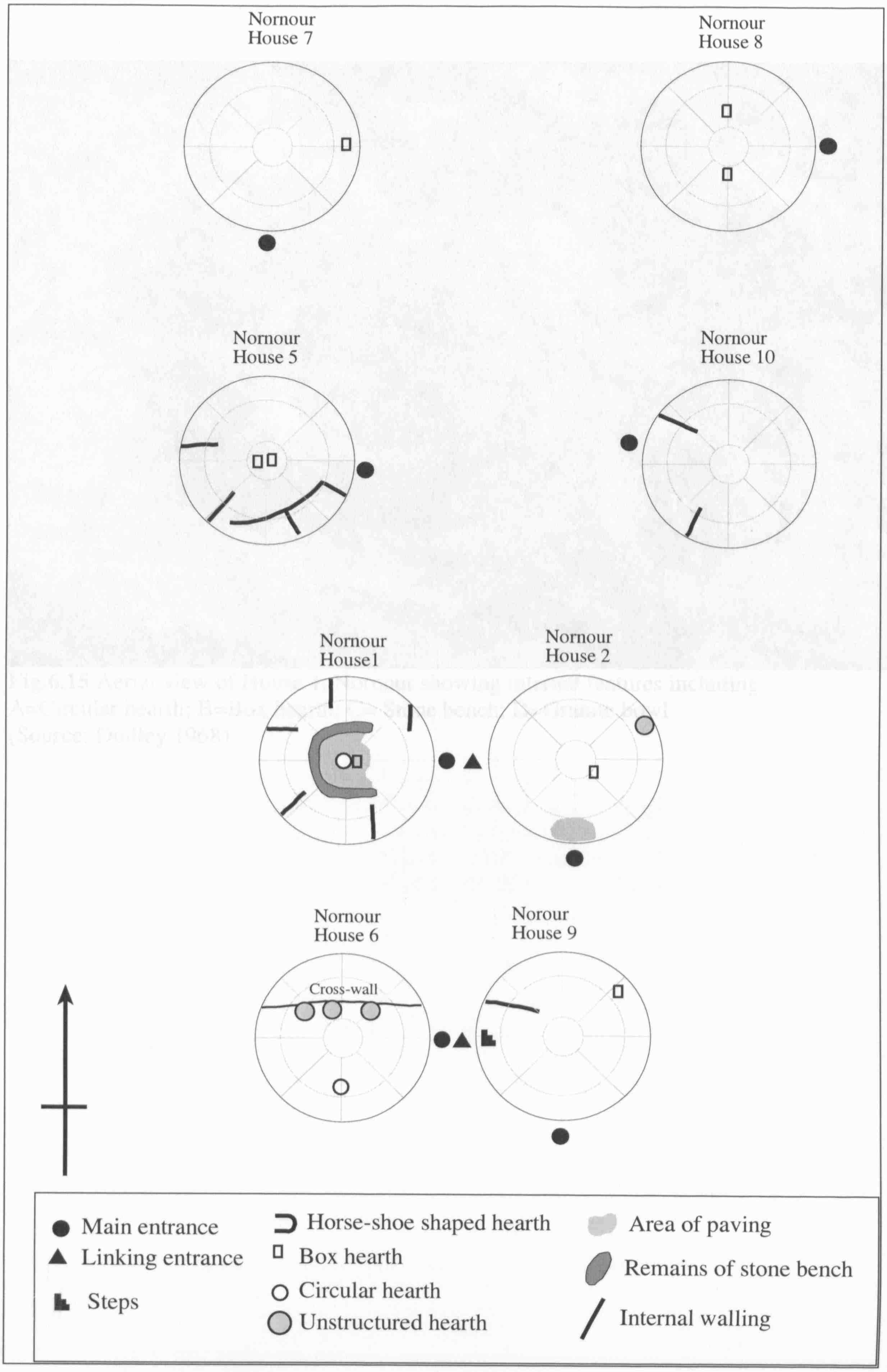


Fig.6.14 (cont.) The placement of internal features within prehistoric houses

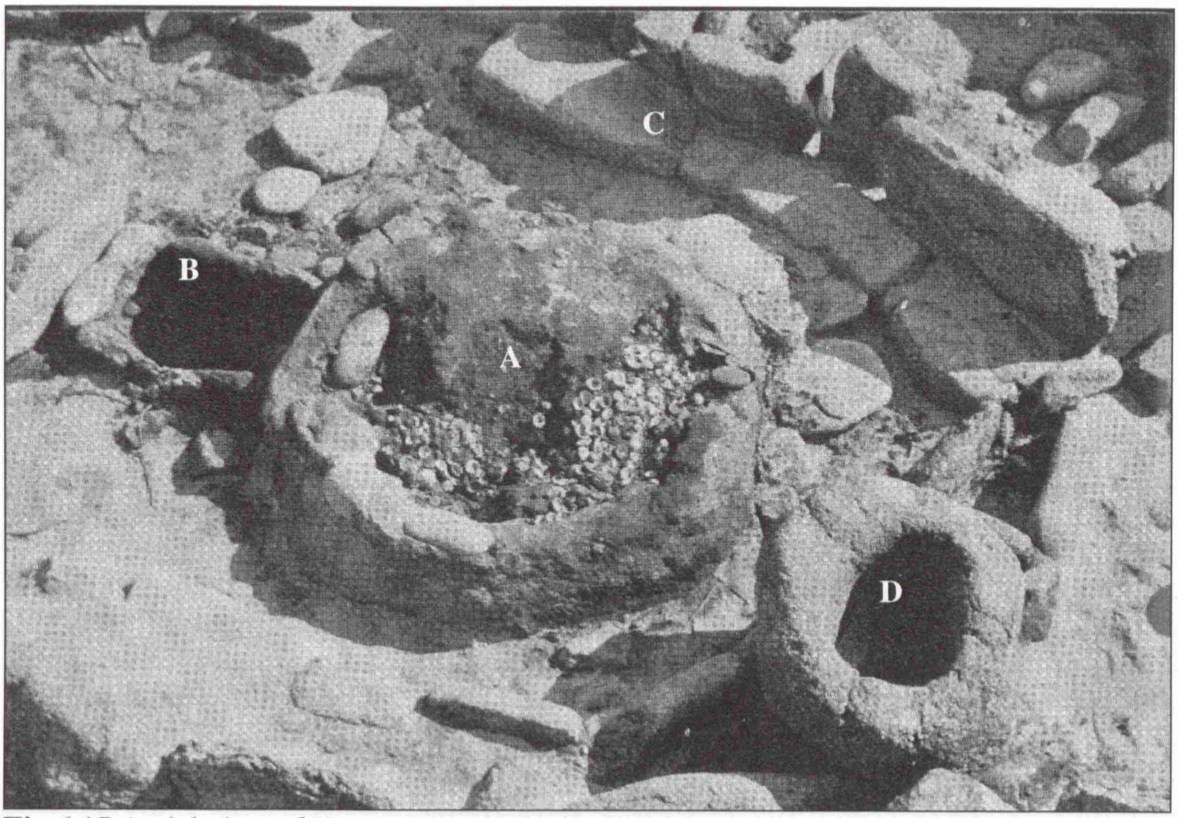


Fig.6.15 Aerial view of House 1, Nornour showing internal features including:
A=Circular hearth; B=Box hearth; C= Stone bench; D=Granite bowl
(Source: Dudley 1968)

Site	Pottery	Worked flint	Unworked flint	Querns / Mullers	Granite Bowls	Quartz tools	Fishing weights	Rubbing stone	Hammer stone	Cup-marked stones	Fire cracked pebble	Foreign stone	Cassiterite	Metalwork	Worked bone	Marine shells	Animal bones	Human remains
Bar Point, St Mary's				✔														
Below Top Rock Hill, St Martin's	✔	✔		✔	✔													
Bonfire Carn, Bryher	✔	✔	✔															
Cliff-Fields, Tresco	✔				✔											✔	✔	
Dial Rocks, Tresco	✔															✔	✔	✔
East Side of Porth Cressa, St Mary's	✔		✔	✔				✔	✔		✔					✔		
English Island Carn, St Martin's	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔					✔	✔	✔	
Great Bay, St Martin's	✔	✔	✔													✔		
Halangy Porth (A), St Mary's	✔	✔	✔	✔				✔	✔	✔						✔	✔	
Halangy Porth (B), St Mary's	✔	✔	✔															
Heathy Hill, Bryher		✔	✔															
Little Bay, St Martin's (House 1, site A)	✔			✔	✔	✔										✔	✔	
Little Bay, St Martin's (House 2, site A)	✔			✔		✔	✔									✔	✔	
Little Bay, St Martin's (House 3, site A)	✔															✔	✔	
Little Bay, St Martin's (House 1, site B)	✔																	
Lawrence's Brow, St Martin's	✔	✔	✔	✔						✔								
Little Arthur, (House 1)	✔	✔	✔	✔			✔	✔	✔	✔						✔		
Little Porth, St Mary's	✔																	
May's Hill, St Martin's	✔													✔		✔	✔	
Nornour (House 9)	✔						✔			✔					✔			
Nornour (Below house 10)														✔				
Nornour (House 1)	✔			✔	✔			✔				✔			✔	✔		
Nornour (House 10, phase 1)	✔	✔		✔	✔													
Nornour (House 10. phase 2)	✔																	
Nornour (House 11)	✔													✔				
Nornour (House 2)					✔		✔											
Nornour (House 3)	✔			✔				✔										
Nornour (House 5)	✔	✔		✔	✔		✔	✔	✔						✔			
Nornour (House 6)	✔				✔										✔			
Nornour (House 7)	✔			✔	✔			✔						✔	✔			
Par Beach, St Martin's (site A),	✔												✔					
Par Beach, St Martin's (site E),	✔	✔																✔
Par Beach, St Martin's (site F),	✔																	
Pendrathen, St Mary's (house 1),				✔														
Pendrathen, St Mary's (house 2),	✔						✔											

Fig. 7.16 Artefacts from prehistoric settlements on Scilly (Continued overleaf)

Site	Pottery	Worked flint	Unworked flint	Querns / Mullers	Granite Bowls	Quartz tools	Fishing weights	Rubbing stone	Hammer stone	Cup-marked stones	Fire cracked pebble	Foreign stone	Cassiterite	Metalwork	Worked bone	Marine shells	Animal bones	Human remains
Pentle Bay, Tresco	✔			✔														
Perpitch, St Martin's	✔																	
Porth Cressa, St Mary's	✔	✔	✔	✔							✔					✔		
Porth Killier, St Agnes	✔	✔	✔	✔							✔					✔	✔	
Poynter's Garden, St Mary's	✔																	
Top Rock Hill, St Martin's	✔			✔														
St Warna's Cove, St Agnes				✔														
Tregea's Porth, St Mary's	✔															✔		
West of Bar Point, St Mary's	✔																	
West Porth, Samson	✔	✔	✔														✔	

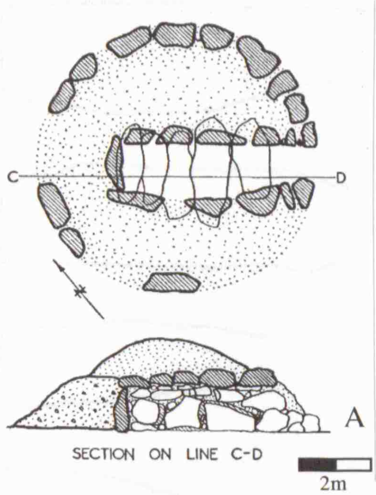
Fig.7.16 (cont.) Artefacts from prehistoric settlements on Scilly

Constructional phases	Construction	Occupation	Abandonment	Total artefacts
House below House 10	no data	no data	109	109
Hearths north of House 5	no data	no data	153	153
House 10 (first occupation)	155	33	no data	188
House 11	no data	36	75	111
House 10 (second occupation)	97	5	145	247
House 6	147	129	722	998
House 9 (first occupation)	74	67	174	315
House 9 (second occupation)	no data	45	141	186
House 5	20	317	893	1230
House 7 (first occupation)	no data	79	no data	79
House 7 (second occupation)	26	5	155	186
			Total	**3802**

Fig. 6.17 Quantities of artefacts recovered from house interiors at Nornour from construction to abandonment. Whilst relatively low concentrations of artefacts were recovered from the constructional and occupational phases it is clear that the process of abandonment resulted in the increased deposition of artefacts.

Fig. 6.18 Stone artefacts from prehistoric settlements.
A, B, D and E: Perforated stone fishing weights (Nornour), C. Grooved stone fishing weight (Nornour), F and G: Stone basins (Nornour), H: Quern stone/basin (Porth Cressa)

Fig. 6.19 Four of the twelve miniature pots found within the fill of the central hearth of House 1, Nornour. (see also Fig 6.15)



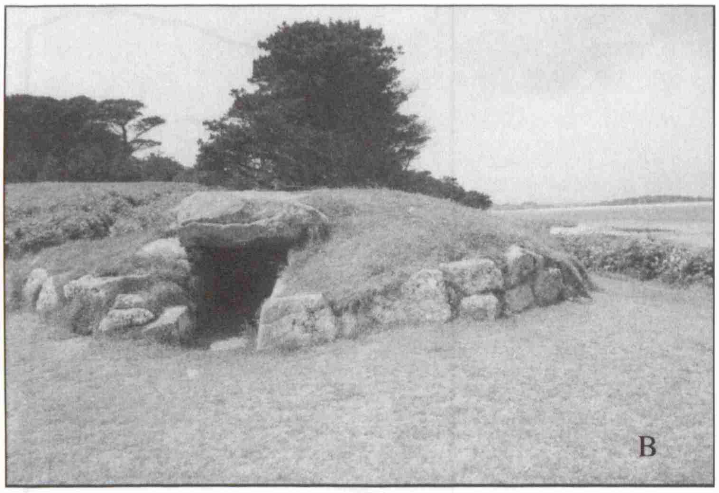


Fig 7.1 Innisidgen Cairn.
A. Plan and section of monument (source: Hencken 1932). B. Photograph of monument.

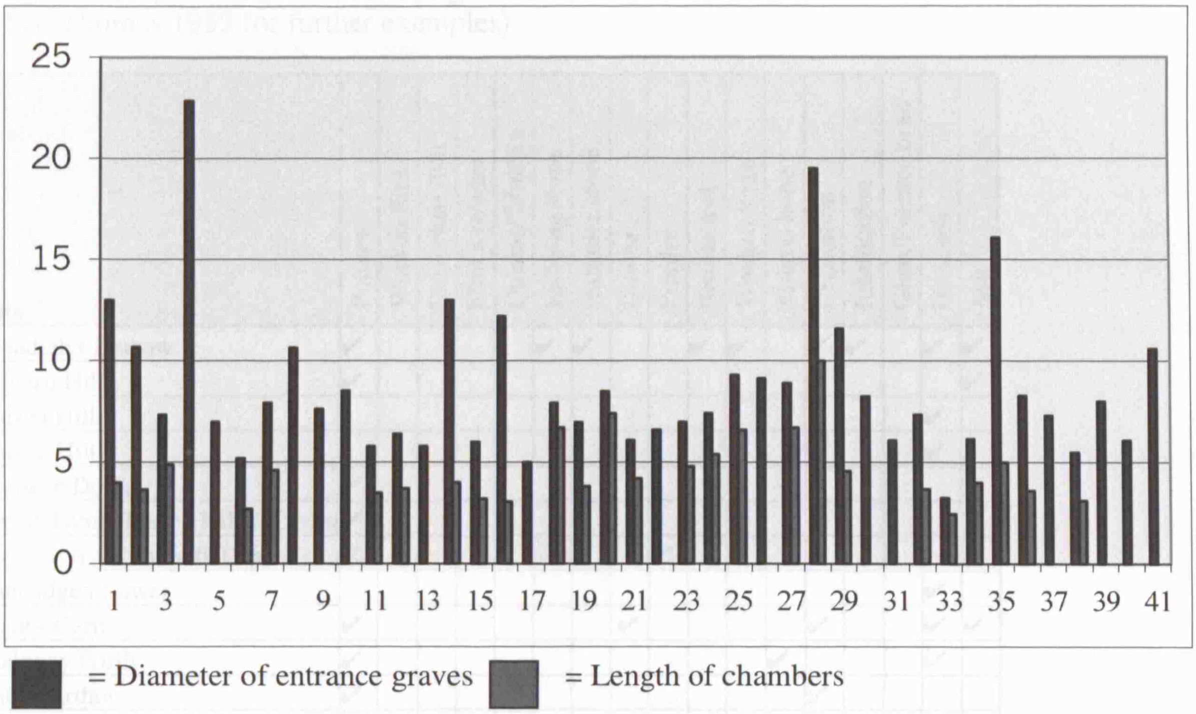


Fig. 7.2 A comparison between the diameter of entrance graves and the length of their chambers

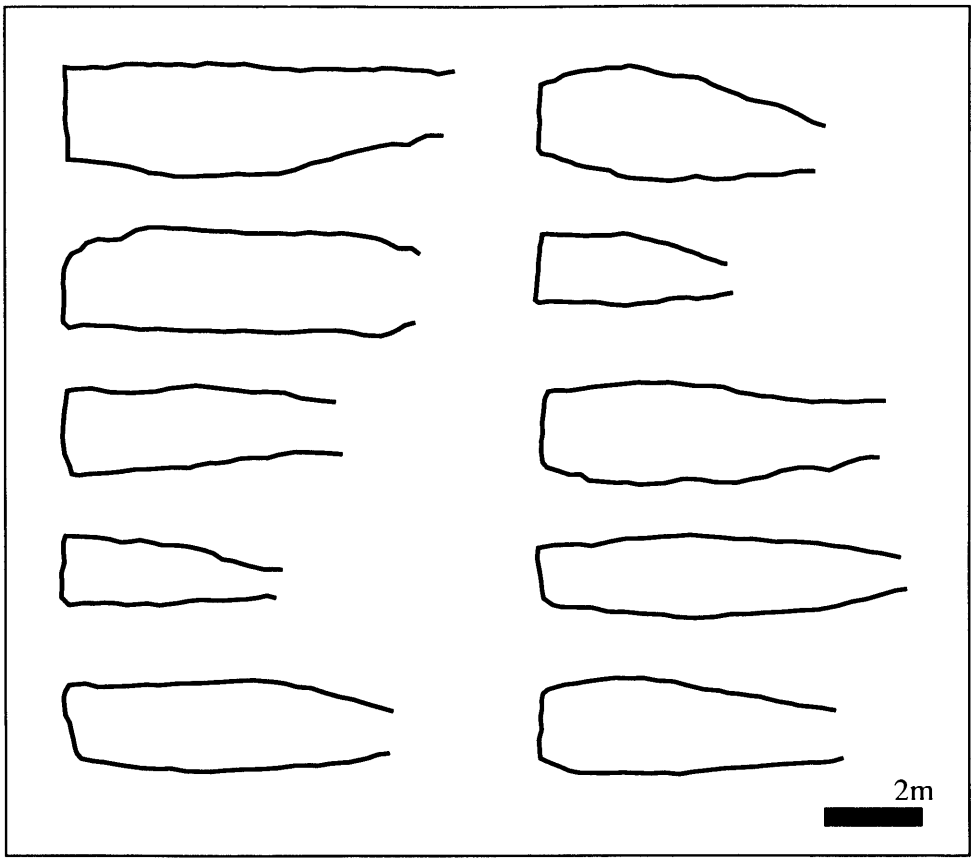


Fig.7.3 The plan-shape of entrance grave chambers
(See Thomas 1985 for further examples)

Site	Pottery	Worked flint	Unworked flint	Flint axe/adze	Querns/ Mullers	Rubbing stone	Hammer stone	Quartz	Pumice	Bronze awl	Worked bone	Animal bone	Cremation	Inhumation	Glass/Faience bead	Dark soil	Ash
Obadiah's Barrow	✔					✔	✔			✔	✔		✔	✔		✔	✔
Kittern Hill	✔												✔				✔
Buzza Hill																✔	
Buzza Hill																✔	
Salakee Down	✔																
Great Tomb, Porth Hellick Down	✔																
Barrow A, Normandy Down	✔								✔								
Innisidgen Lower																✔	
Bant's Carn	✔							✔					✔			✔	✔
Halangy Porth	✔											✔				✔	
Little Arthur	✔												✔				
Middle Arthur	✔												✔				✔
Knackyboy	✔			✔						✔			✔		✔	✔	✔
Samson	✔	✔	✔		✔		✔										

Fig.7.4 Artefacts from entrance graves

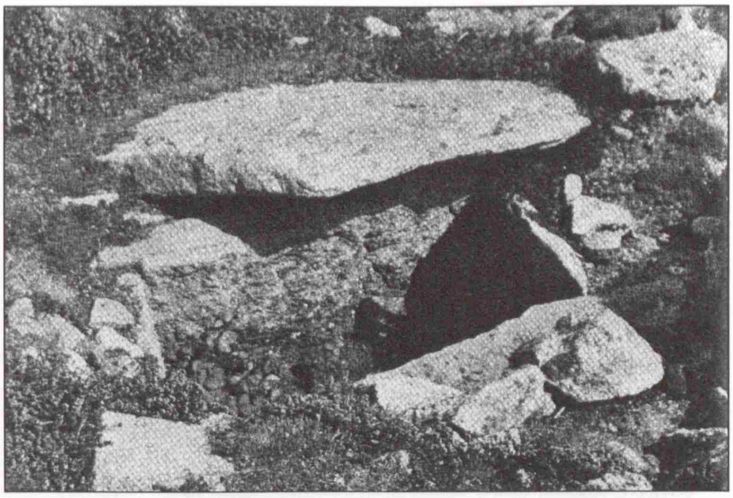


Fig.7.5 Cist found beneath a cairn on North Hill, Samson. Photograph taken by Alexander Gibson *c.* 1862. (Source: Ashbee 1975, 86).

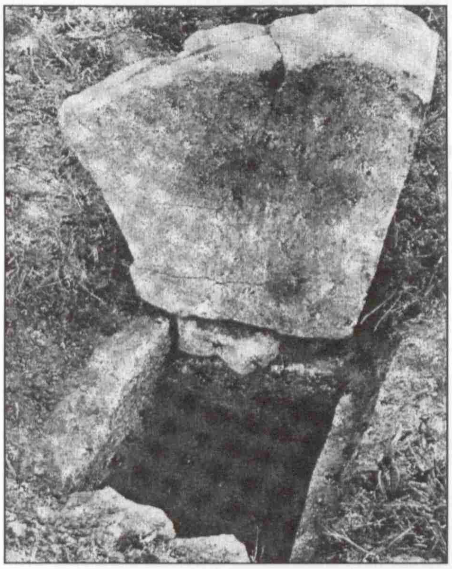


Fig. 7.6 Flat cist in Klondyke Field, St Mary's
Photographed by Alexander Gibson *c.* 1899 (Source: Ashbee 1974, 86).

	Pottery	Worked flint	Holed stones	Agate	Bronze knife	Bronze armlets	Cremation
Carron Rocks, St Martin's	✓			✓	✓		
Hillbenigates, St Martin's	✓	✓					
Newford, St Mary's	✓						✓
North Hill, Samson							✓
Old Town, St Martin's	✓						✓
Peninnis Head, St Mary's			✓	✓		✓	
Pernargie Carn, St Martin's	✓						

Fig.7.7 Artefacts from cists.

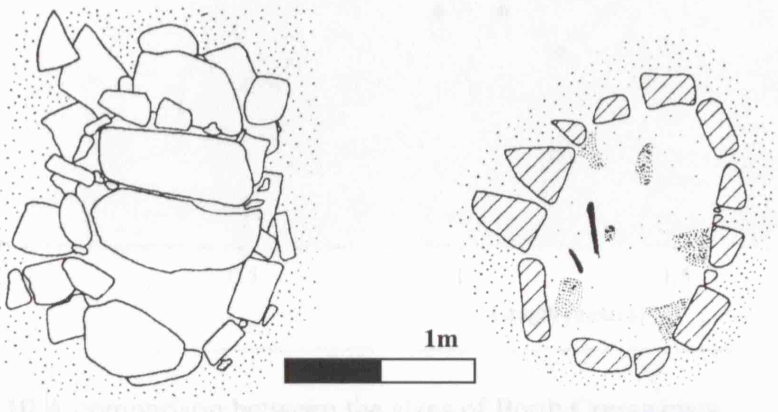


Fig.7.8 Porth Cressa cist before and after the removal of cover stones (Source: Ashbee 1979).

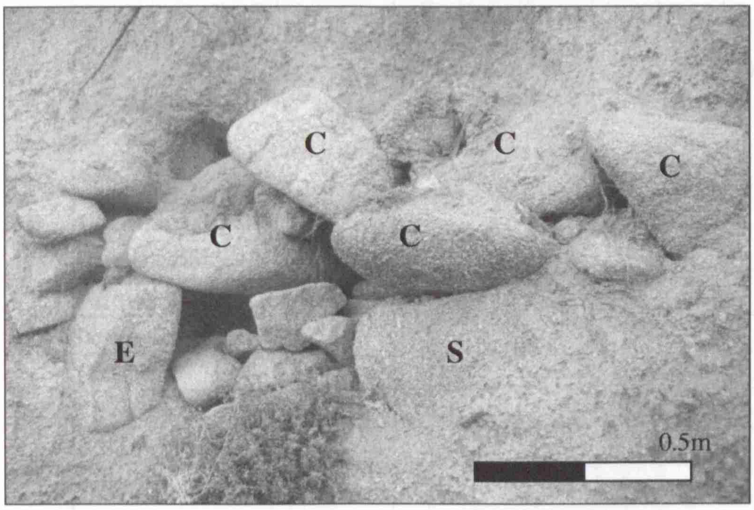


Fig.7.9 Cist exposed in a cliff-section on the east side of Porth Cressa Bay
Key: C = Capstone; E = End stone of chamber wall; S= Side stone of chamber wall

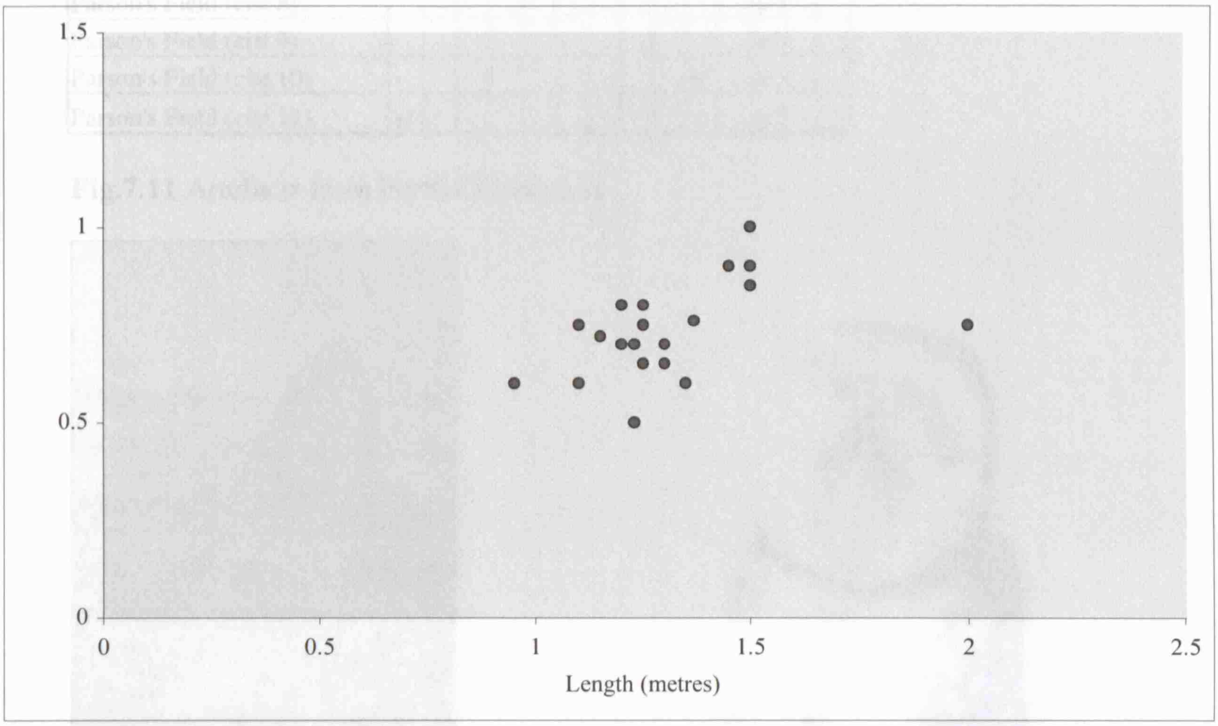


Fig. 7.10 A comparison between the sizes of Porth Cressa cists

PRN	First millenium	Worked flint	Unusual pebbles	Iron fragment	Sword	Shield	Mirror	Tin artefact	Bronze ring	Bronze broach	Bronze fragment	Inhumation	Glass bead	Amber
Old Man	✔									✔		✔		
Lawrence Bay	✔			✔									✔	✔
Par Beach Hut A												✔		
Par Beach (Crawford)												✔		
Hillside Farm					✔	✔	✔	✔	✔	✔		✔		
Poynter's Garden (cist 1)		✔	✔									✔		
Poynter's Garden (cist2)		✔	✔							✔	✔	✔		
Poynter's Garden (cist 3)		✔	✔									✔		
Poynter's Garden (cist 4)		✔	✔									✔		
Poynter's Garden (cist 5)		✔	✔											
Parson's Field (cist 2)										✔		✔		
Parson's Field (cist 3)												✔		
Parson's Field (cist 4)												✔		
Parson's Field (cist 5)	✔												✔	
Parson's Field (cist 7)										✔		✔		
Parson's Field (cist 8)												✔		
Parson's Field (cist 9)												✔		
Parson's Field (cist 10)										✔		✔		
Parson's Field (cist 11)	✔											✔		

Fig.7.11 Artefacts from Porth Cressa cists

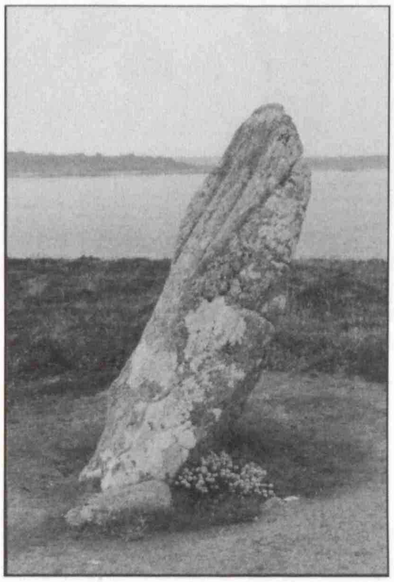


Fig.7.12 The Old Man of Gugh
Standing stone (height 2.4m)

Fig.7.13 Statue menhir from Chapel Down, St Martin's
(Source: Ashbee and Thomas 1990)

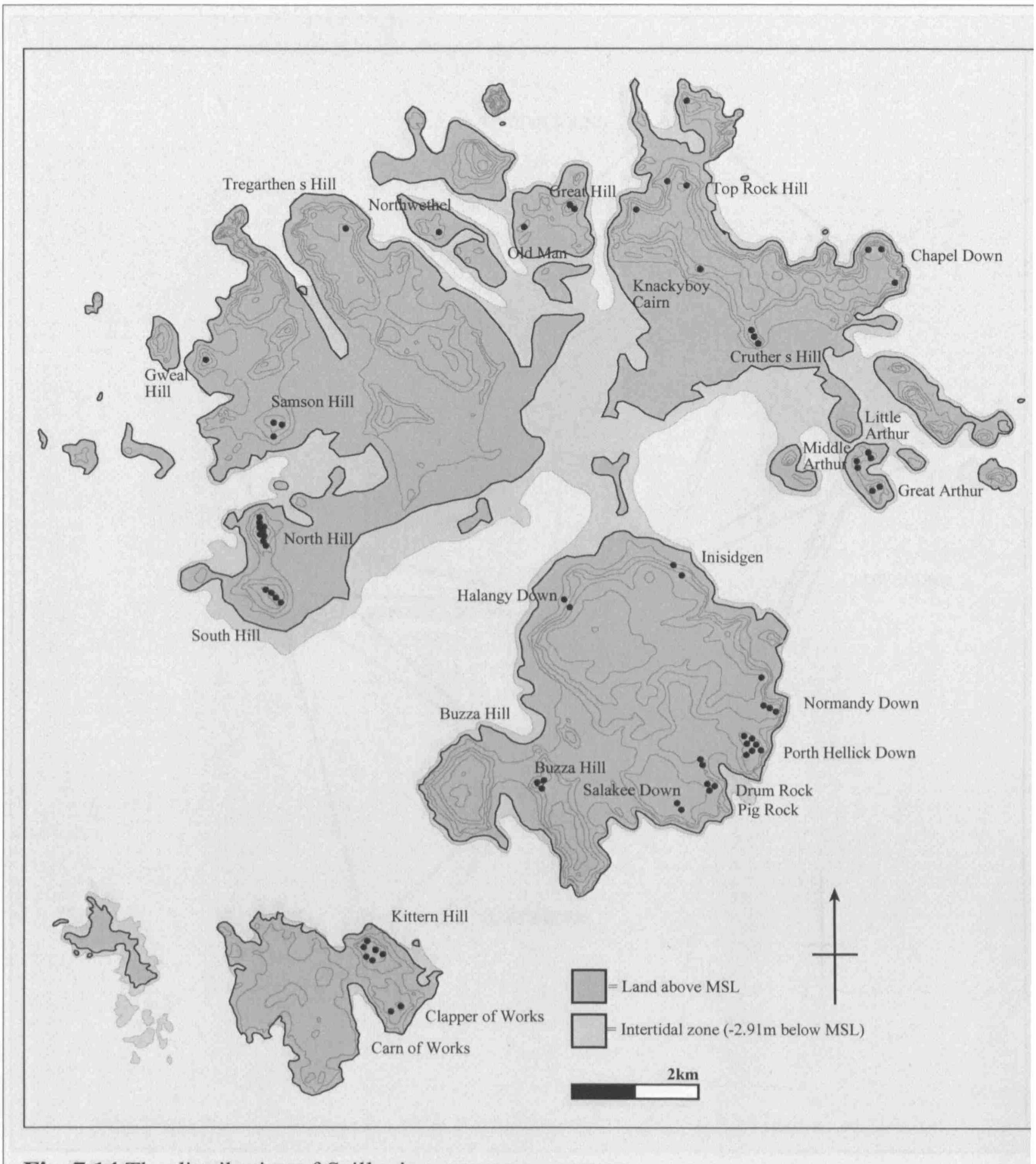


Fig. 7.14 The distribution of Scillonian entrance graves

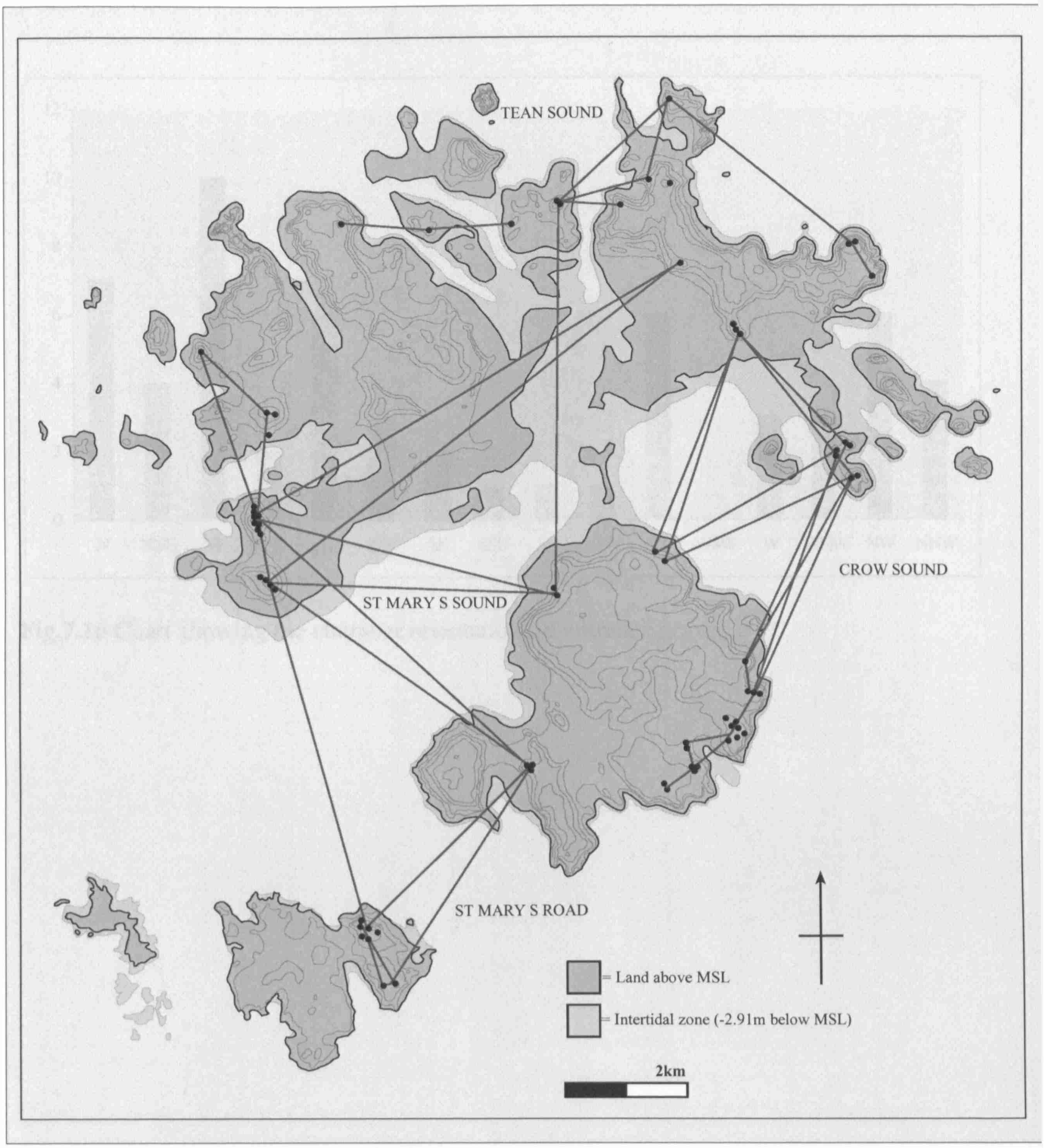


Fig.7.15 Inter-visibility between Scillonian entrance graves
(Lines between monuments denote inter-visibility)

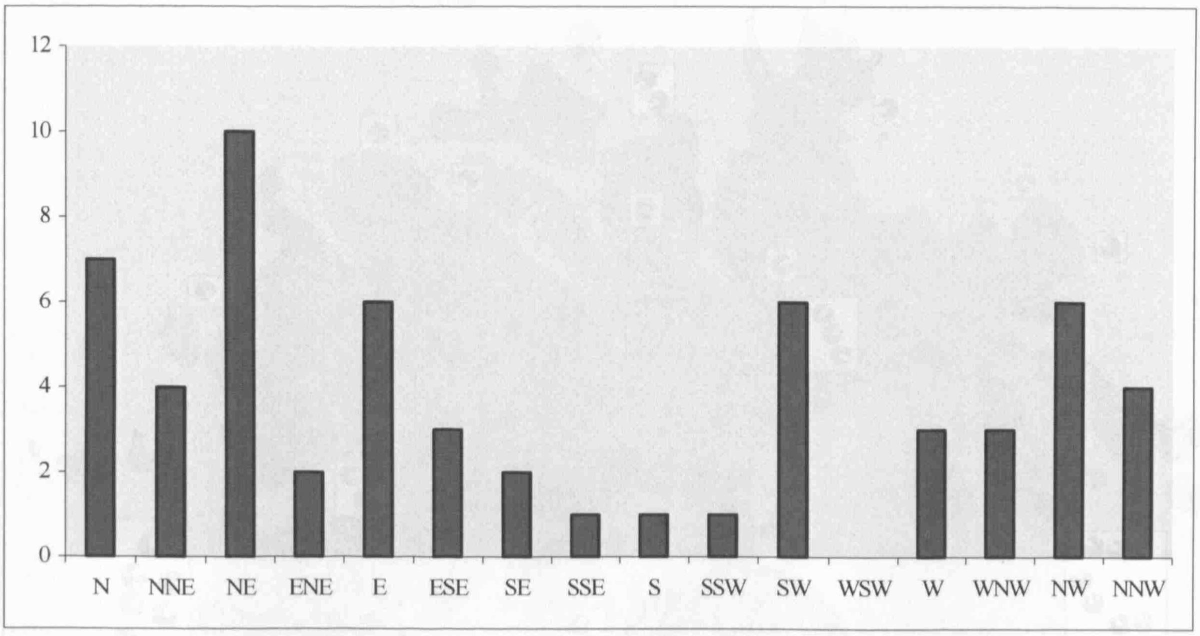


Fig.7.16 Chart showing the chamber orientations of entrance graves

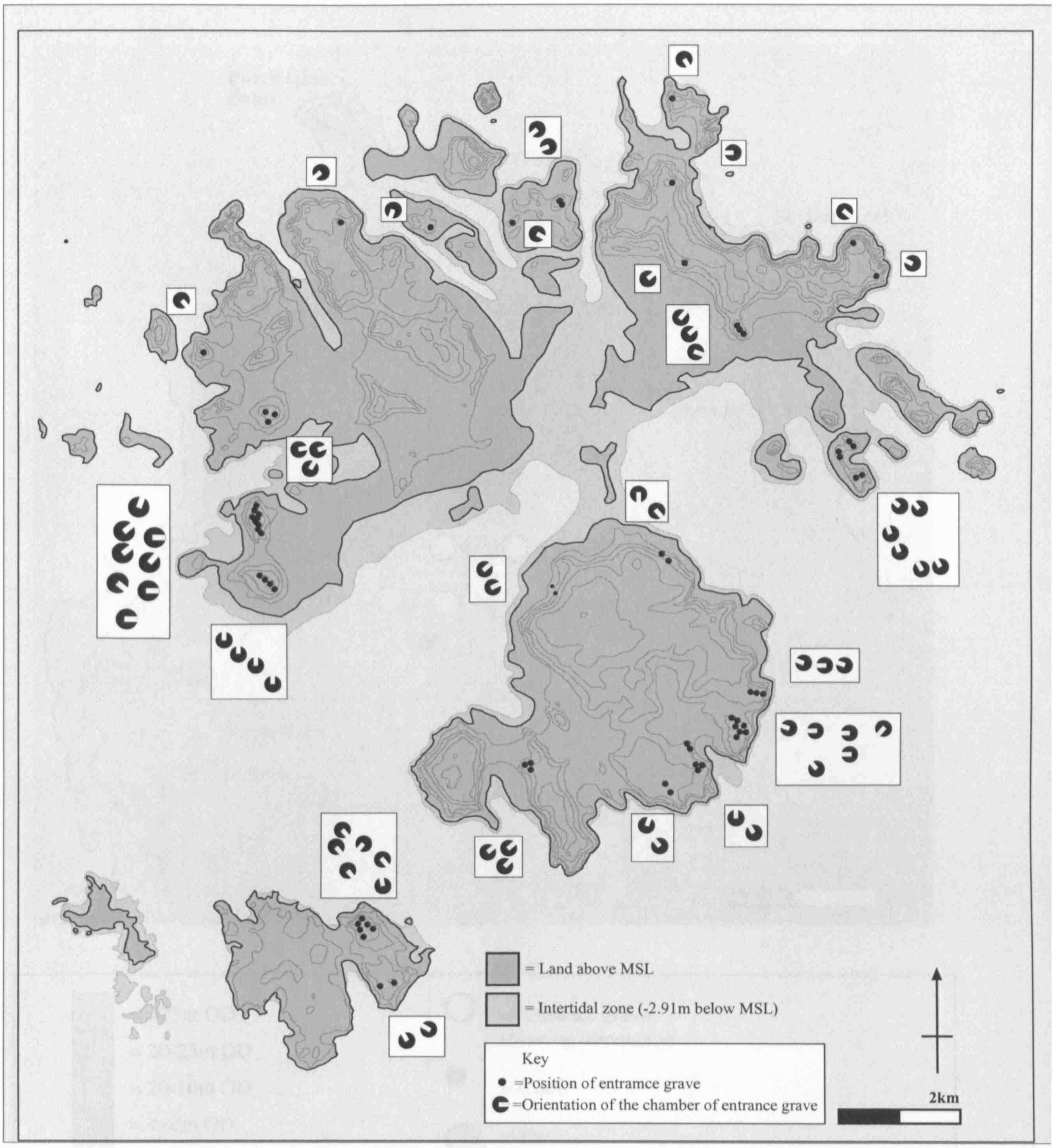


Fig.7.17 The orientations of entrance graves in relation to the island landscape

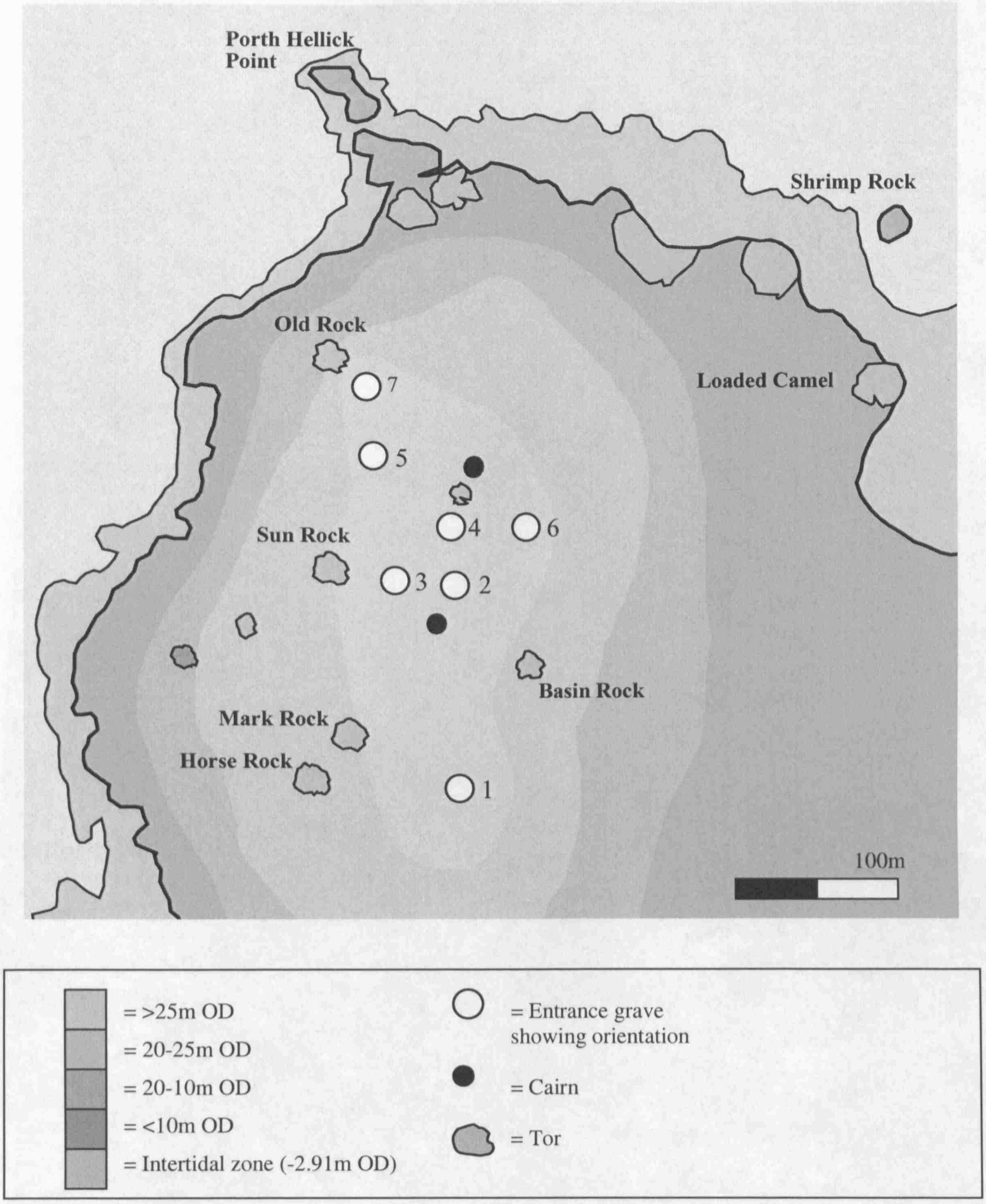


Fig. 7.18 The landscape setting and orientation of entrance graves on Porth Hellick Down, St Mary's.

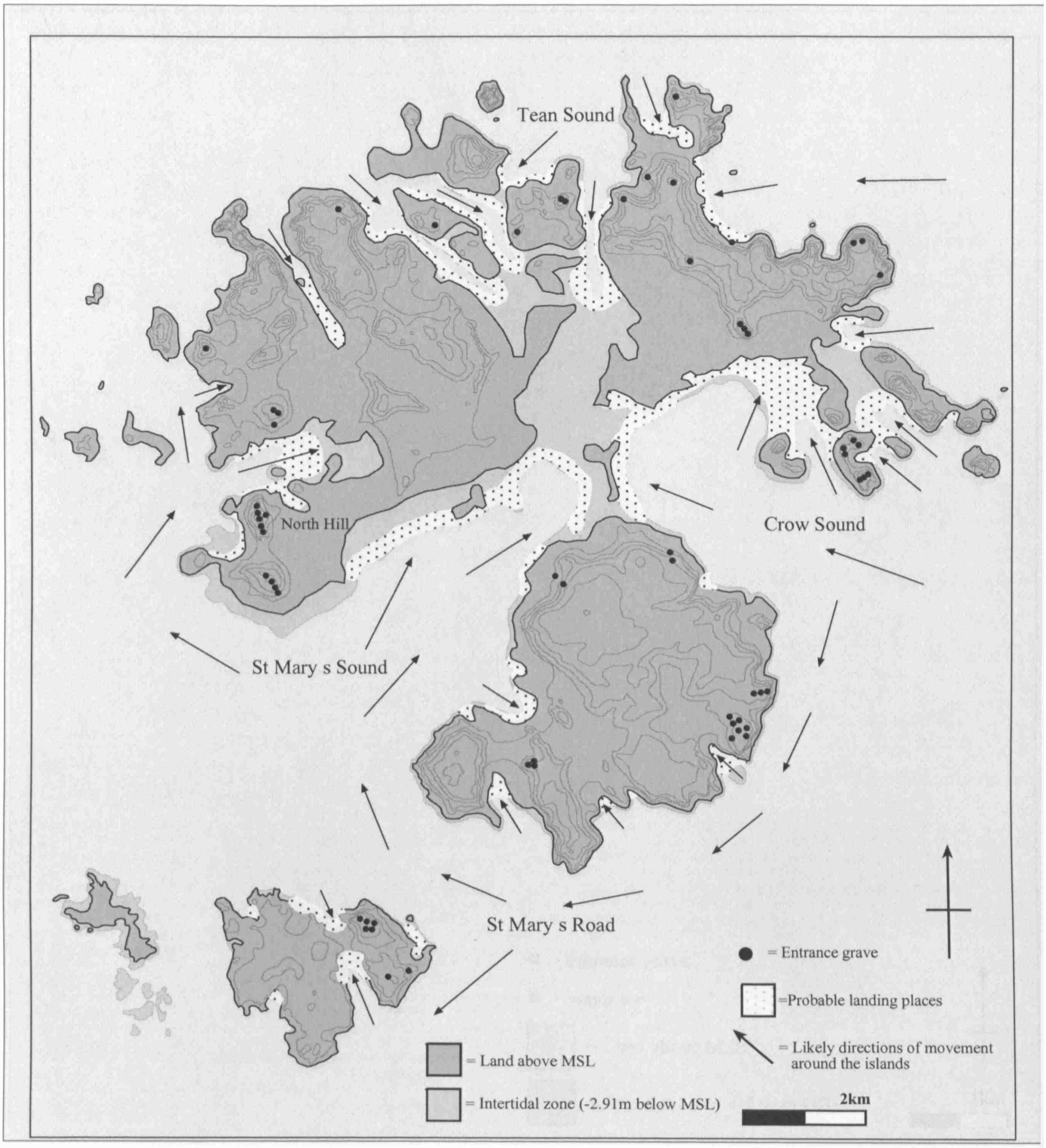


Fig.7.19 Landing places and directions of movement around the archipelago in relation to the distribution of entrance graves

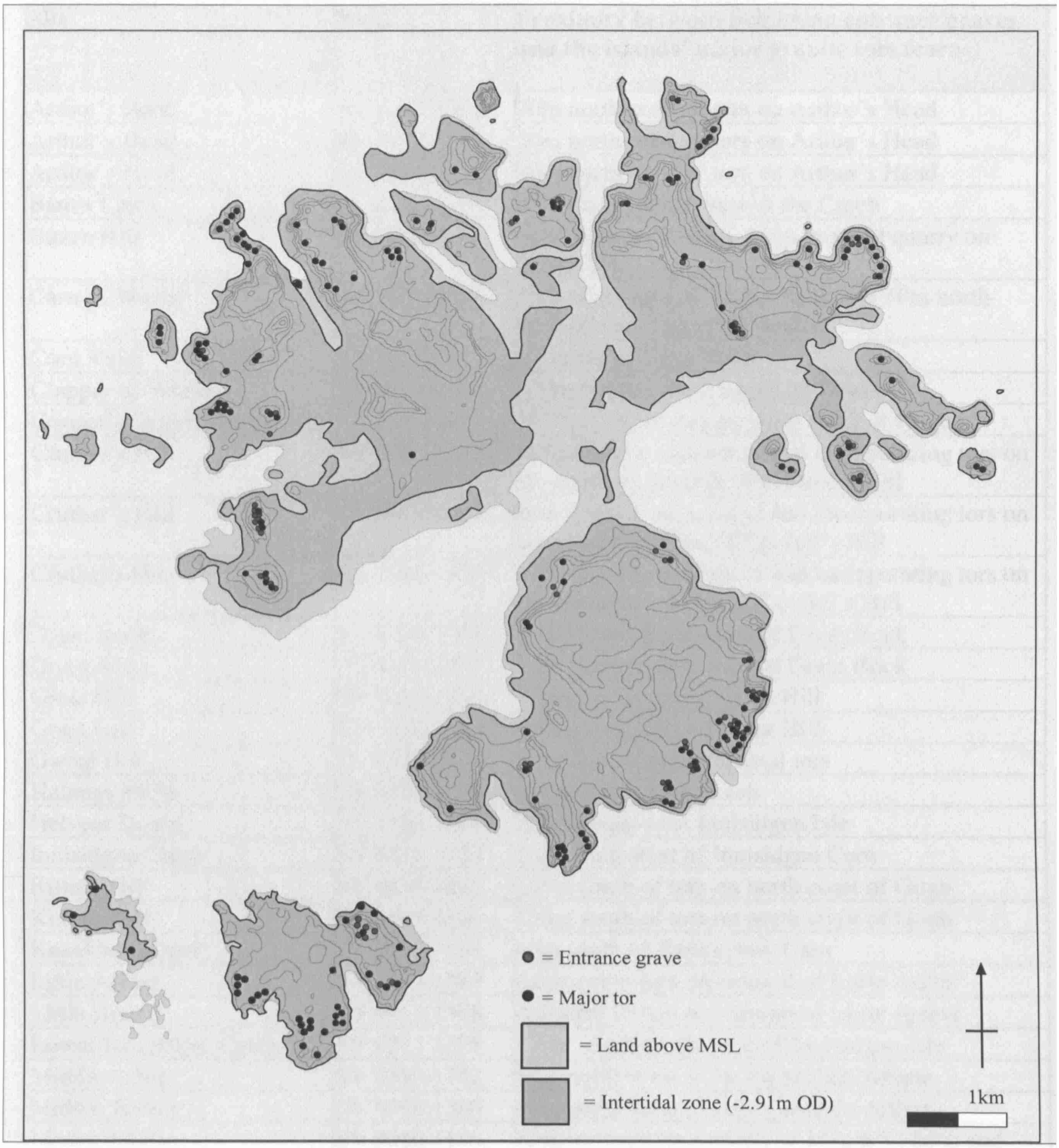


Fig.7.20 A comparison between the distribution of the islands' major tors and entrance graves. (Source of major geological tor data: Mitchel and Orme 1967; Scourse 1986).

Site	NGR	Proximity between Scillonian entrance graves and the islands' major granite tors (carns)
Arthur's Head	SV 9417 1353	30m north-west of tors on Arthur's Head
Arthur's Head	SV 9418 1353	30m north-west of tors on Arthur's Head
Arthur's Head	SV 9424 1355	30m north-west of tors on Arthur's Head
Bant's Cairn	SV 9099 1230	250m west-north-west of the Creeb
Buzza Hill	SV 90591038	30m west-north-west from tors and quarry on Buzza Hill
Carn of Works	SV 8915 0800	20m south-east of Target Rock and 50m north-west of the Clapper of Works
Carn Valla	SV 8886 0847	Adjacent to Carn Valla
Clapper of Works	SV 8902 0794	120m west of the Clapper of Works
Cooper's Grave, Kittern Hill	SV 8889 0861	150m south of tors on north coast of Gugh
Cruther's Hill	SV 9295 1513	Immediately adjacent to and incorporating tors on the southern summit of Cruther's Hill
Cruther's Hill	SV 9291 1517	Immediately adjacent to and incorporating tors on the middle summit of Cruther's Hill
Cruther's Hill	SV 9289 1522	Immediately adjacent to and incorporating tors on the northern summit of Cruther's Hill
Drum Rock	SV 9233 1065	100m north-north-west of Drum Rock
Drum Rock	SV 9234 1064	100m north-north-west of Drum Rock
Great Hill	SV 9098 1655	Adjacent to tors on Great Hill
Great Hill	SV 9102 1651	Adjacent to tors on Great Hill
Gweal Hill	SV 8715 1491	30m west of major coastal tors
Halangy Porth	SV 9095 1240	200m west of the Creeb
Helvear Down	SV 9193 1265	200m south-west Innisidgen Isle
Innisidgen Cairn	SV 9218 1264	10m south-west of Innisidgen Carn
Kittern Hill	SV 8879 0866	150m south of tors on north coast of Gugh
Kittern Hill	SV 8895 0860	150m south of tors on north coast of Gugh
Knackboy Cairn	SV 9235 1586	40m south of Knackyboy Carn
Little Arthur	SV 9413 1387	Adjacent to tors on summit of Little Arthur
Little Arthur	SV 9412 1388	Adjacent to tors on summit of Little Arthur
Lower Innisidgen Cairn	SV 9211 1271	170m south-south-west of Innisidgen Isle
Middle Arthur	SV 9398 1382	50m north-west of tor on Middle Arthur
Middle Arthur	SV 9398 1380	50m north-west of tor on Middle Arthur
Mount Todden	SV 9286 1149	10m from tor on summit of Mount Todden and 100m south west of Mount Todden Battery
Normandy Down	SV 9297 1118	130m west of Camper Cuttle
Normandy Down	SV 9301 1117	98m west of Camper Cuttle
Normandy Down	SV 9307 1117	35m west of Camper Cuttle
North Hill, Samson	SV 8771 1324	Adjacent to tors that form a rocky spine along the summit of North Hill
North Hill, Samson	SV 8770 1309	Adjacent to tors that form a rocky spine along the summit of North Hill

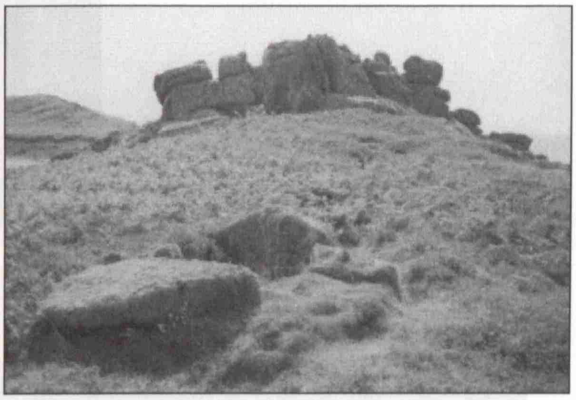
Fig.7.21 The relationship between entrance graves and tors.
(The term adjacent is used here to define a relationship of less than 10m or adjoining a tor).

Site	NGR	Proximity to major tors that could be used as wayfaring points
North Hill, Samson	SV 8774 1308	Adjacent to tors that form a rocky spine along the summit of North Hill
North Hill, Samson	SV 8771 1307	Adjacent to tors that form a rocky spine along the summit of North Hill
North Hill, Samson	SV 8773 1306	Adjacent to tors that form a rocky spine along the summit of North Hill
North Hill, Samson	SV 8773 1304	2m west of the Logan stone
North Hill, Samson	SV 8772 1302	10m north-north-west of the Logan Stone
North Hill, Samson	SV 8773 1299	30m north-north-west of the Logan Stone
North Hill, Samson	SV 8777 1292	10m north-north-west of large tor on North Hill
North side of Chapel Down	SV 9408 1606	15m north-west and above Popplestone
Northwethel	SV 8960 1628	Adjacent to tors on Northwethel
Obadiah's Barrow	SV 8880 0851	North-west of Carn Valla
Old Man	SV 9049 1631	Adjacent to tor on the Islet of Old Man
Pig Rock	SV 9247 1039	50m north-north-west of Pig Rock
Pig Rock	SV 9249 1039	50m north-north-west of Pig Rock
Pig Rock	SV 9247 1037	45m north-north-west of Pig Rock
Porth Hellick Down	SV 9285 1073	30m north-north-west of Sun Rock
Porth Hellick Down	SV 9289 1065	70m west-north-west of Basin Rock
Porth Hellick Down	SV 9289 1061	15m west of Old Rock
Porth Hellick Down	SV 9281 1069	70m west of Old Rock
Porth Hellick Down	SV 9284 1089	70m west-south-west of Mark Rock
Porth Hellick Down	SV 9285 1069	40m west of Sun Rock
Porth Hellick Down	SV 9288 1072	40m south-west of the Giant's Chair
Salakee Down	SV 9218 1016	28m from tors on Ward Hill
Samson Hill	SV 8778 1426	15m from Bonfire Carn
Samson Hill	SV 8793 1425	5m from Bonfire Carn
South Hill, Samson	SV 8785 1240	Adjacent to tors that form a rocky spine along the summit of South Hill
South Hill, Samson	SV 8786 1239	Adjacent to tors that form a rocky spine along the summit of South Hill
South Hill, Samson	SV 8787 1237	Adjacent to tors that form a rocky spine along the summit of South Hill
South Hill, Samson	SV 8795 1236	Adjacent to tors that form a rocky spine along the summit of South Hill
South-east side of Chapel Down	SV 9438 1574	70m north-west Cornwethers but also adjacent to minor tors on Chapel Down
Tinker's Hill	SV 9169 1649	30m north-west of Tinker's Rock
Top Rock Hill	SV 9221 1673	80m east-north-east of Top Rock
Tregarthen Hill	SV 8864 1626	40m north of tors on summit of Tregarthen's Hill
White Island	SV 9224 1762	10m south-east of tors on north-west coast of White Island
Works Carn	SV 8782 1413	Constructed on top of Works Carn and 15m south of tors on slope of Samson Hill.

Fig.7.21 (cont.) The relationship between entrance graves and tors.
(The term adjacent is used here to define a relationship of less than 10m or adjoining a tor).

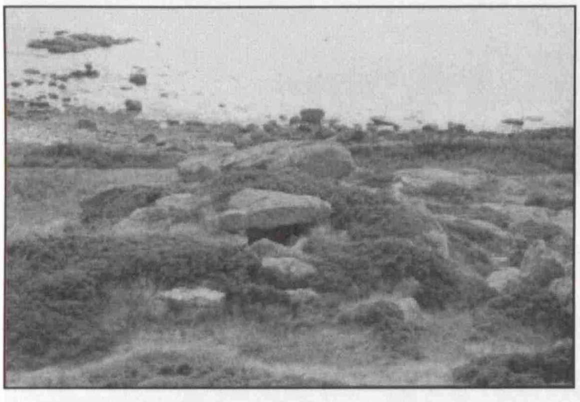
A: View from entrance grave on Tinker's Hill of Tinker's Rock (Camera facing north-west)

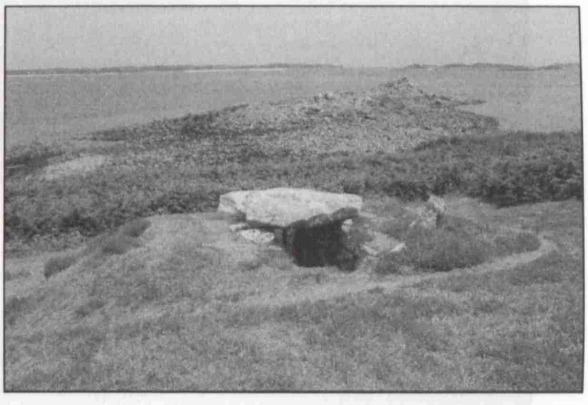
B: View from entrance grave of Innisidgen Cairn of Innisidgen Carn (Camera facing north-east)



C: View from entrance grave of tors on western coast of Gweal Hill (Camera facing west)

D: View from entrance grave of tors on Middle Arthur (Camera facing south)

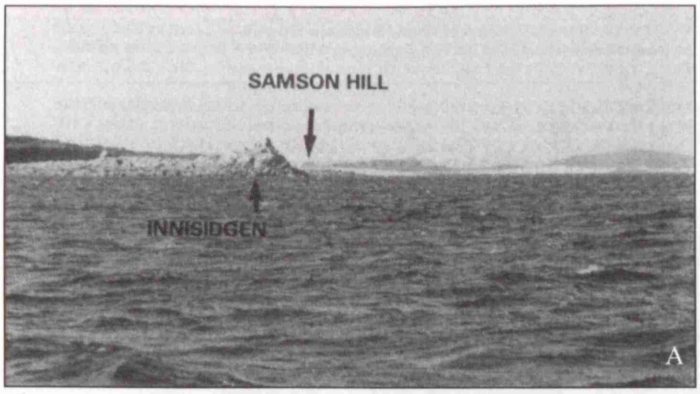




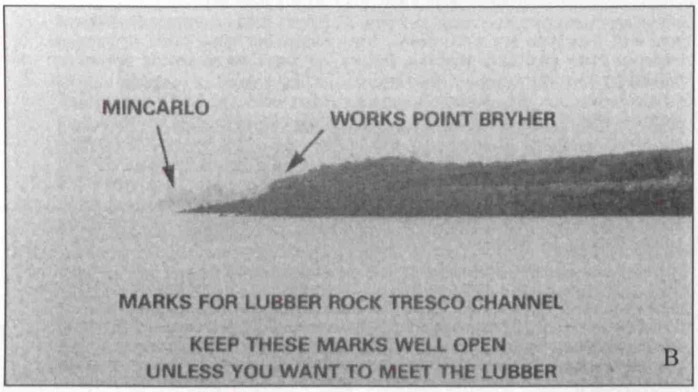
E: Entrance grave placed on top of the tor of Work's Point Carn (Camera facing south)

F: View from entrance grave of Innisidgen of coastal tor (Photograph taken during low spring tide with camera facing north-east)

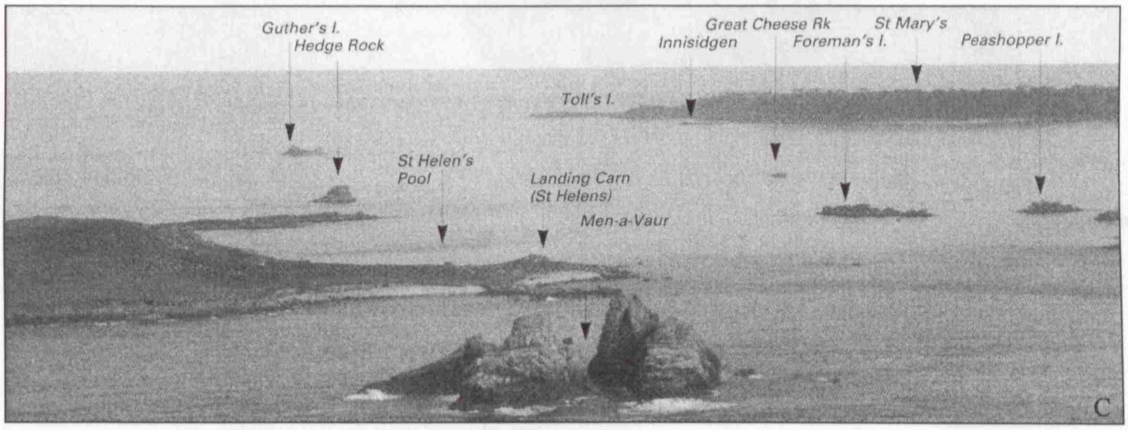
Fig. 7.22 The close proximity between entrance graves and coastal tors



(See also Fig.7.22, F)



(See also Fig. 7.22, E)



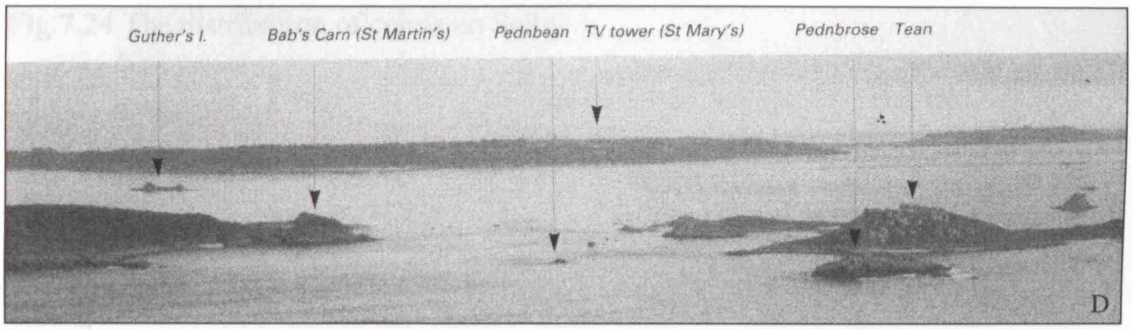


Fig.7.23 Wayfaring points such as coastal tors used within modern pilot guides to Scilly. (Source: A and B. Norm 1980; C and D. Brandon 1999)

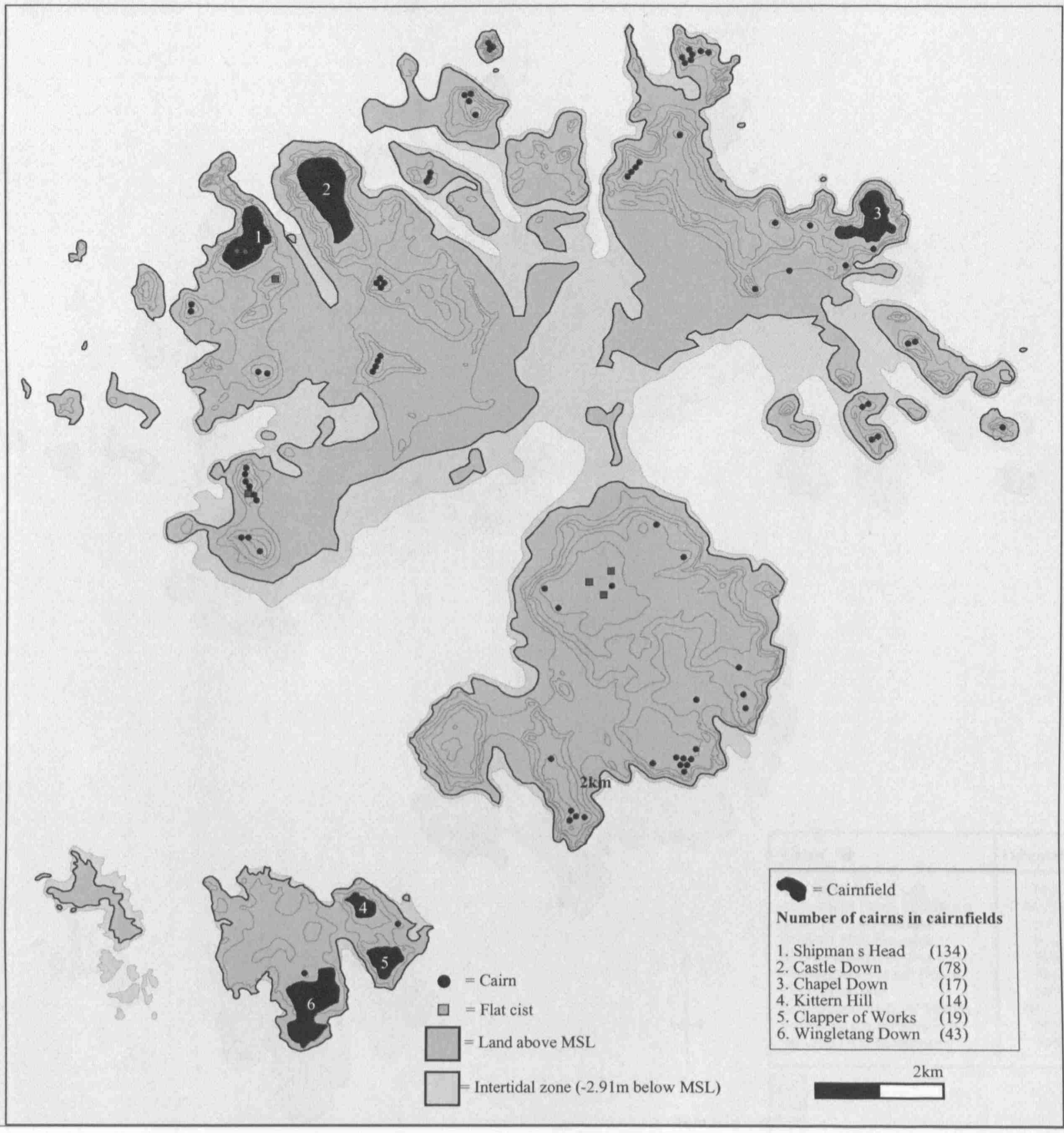


Fig.7.24 The distribution of cairns on Scilly

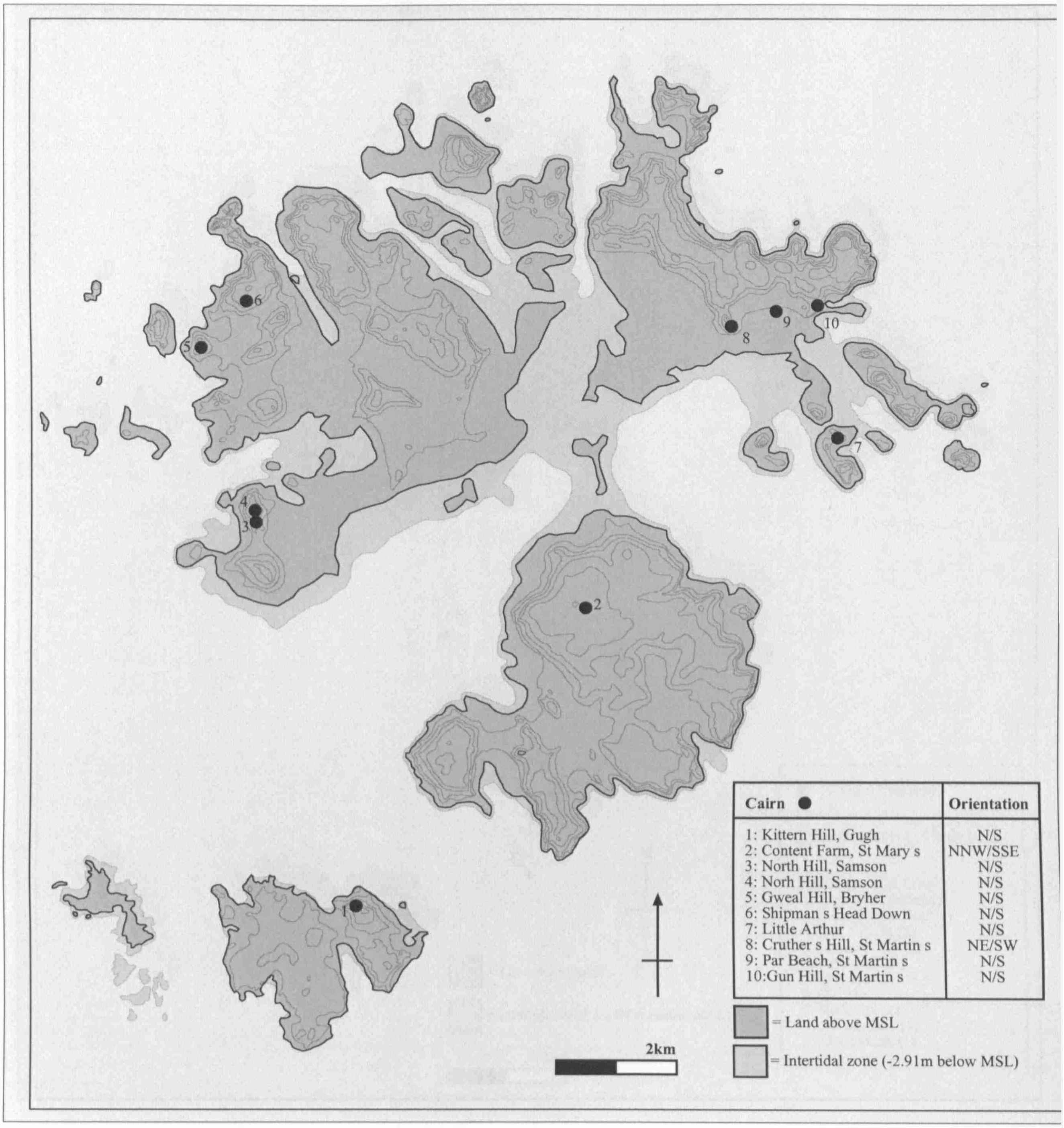


Fig.7.25 The orientation of cists

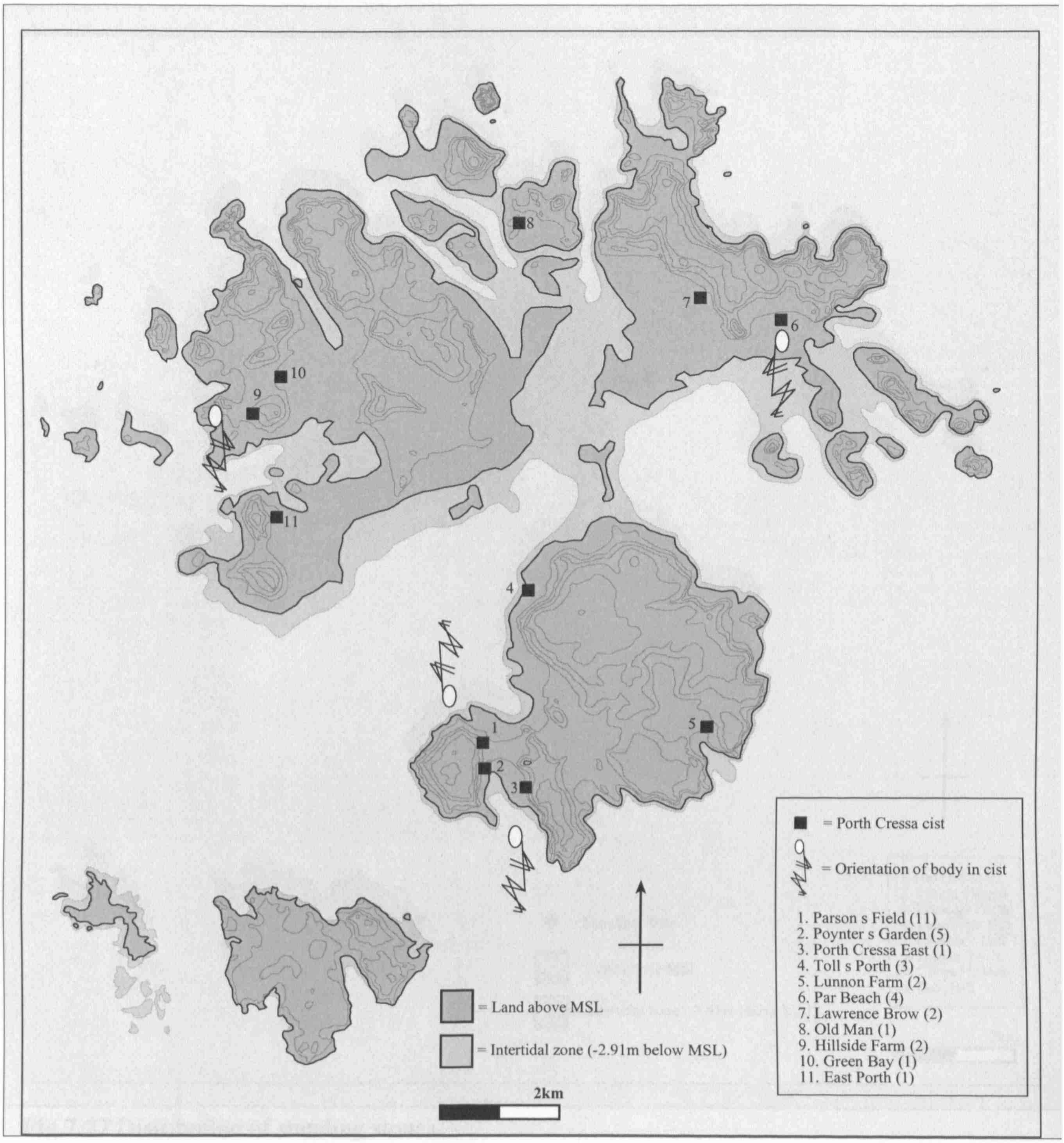


Fig.7.26 The distribution and orientation of Porth Cressa cists

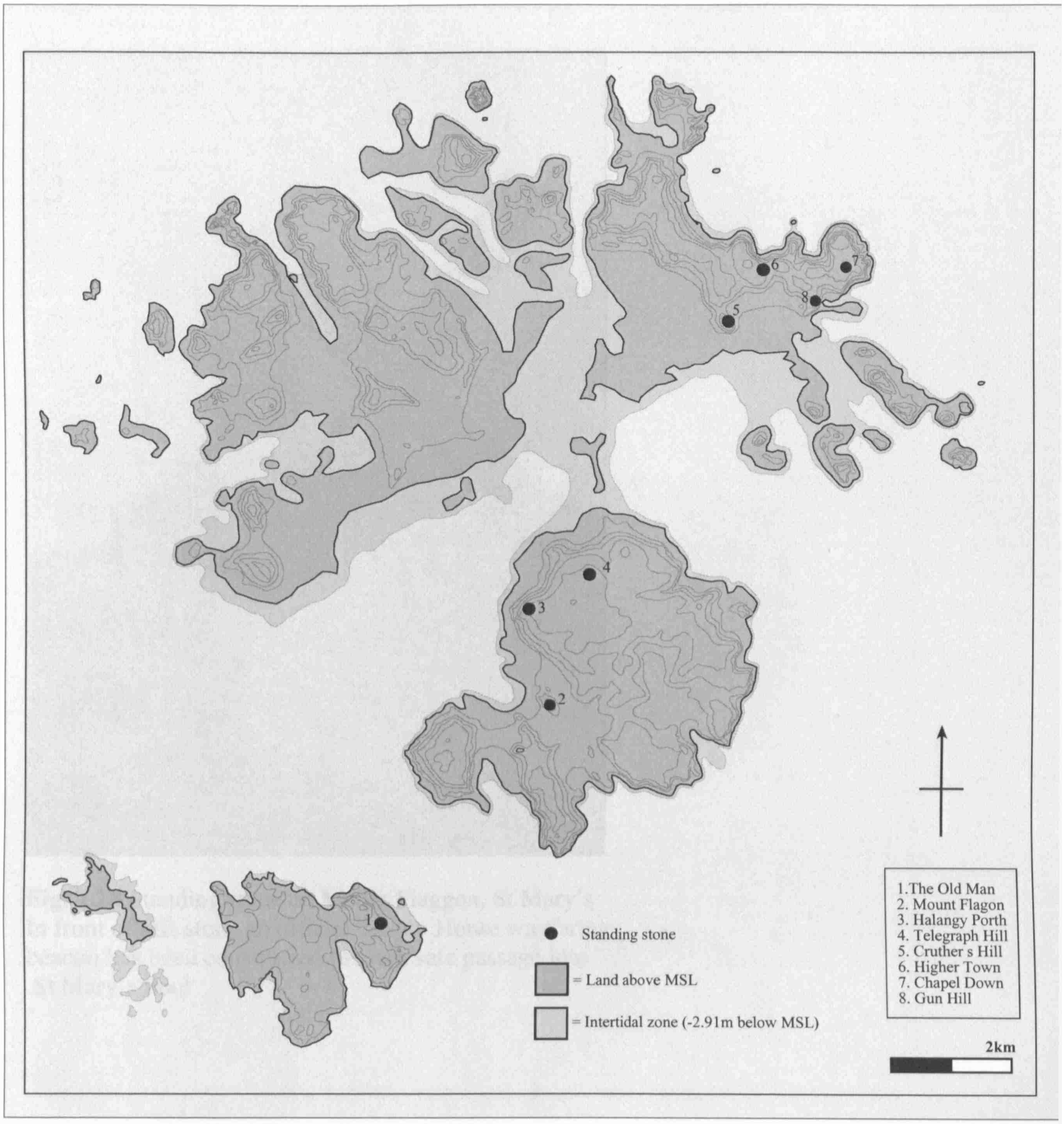


Fig.7.27 Distribution of standing stones

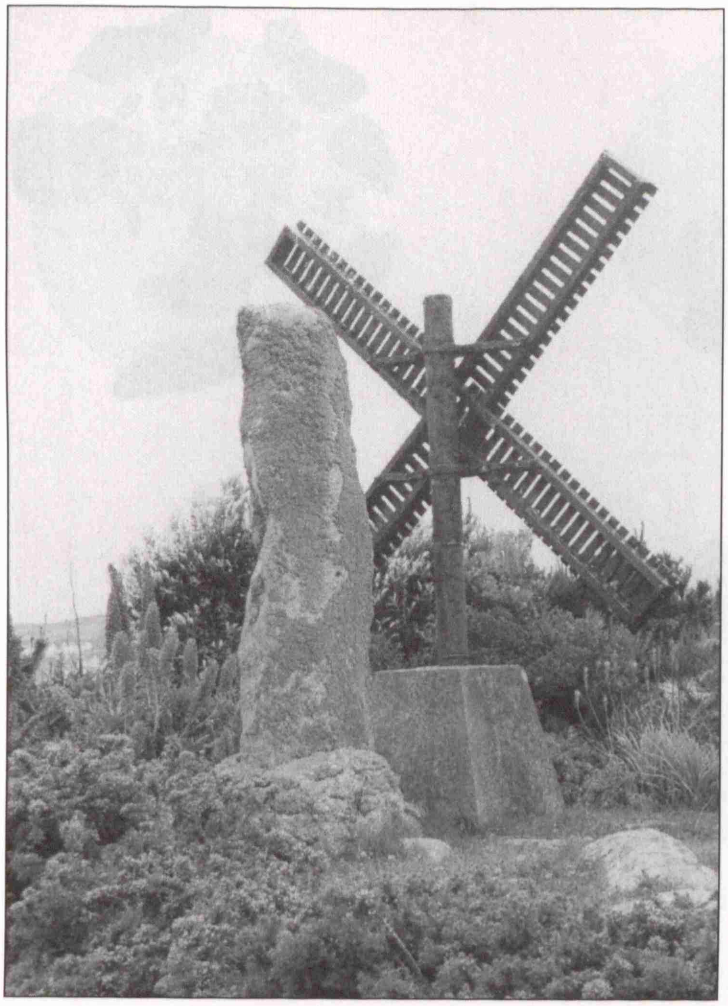


Fig. 7.28 Standing stone on Mount Flaggon, St Mary's
In front of this stone an official Trinity House wayfaring beacon has been constructed to mark safe passage into St Mary's Pool

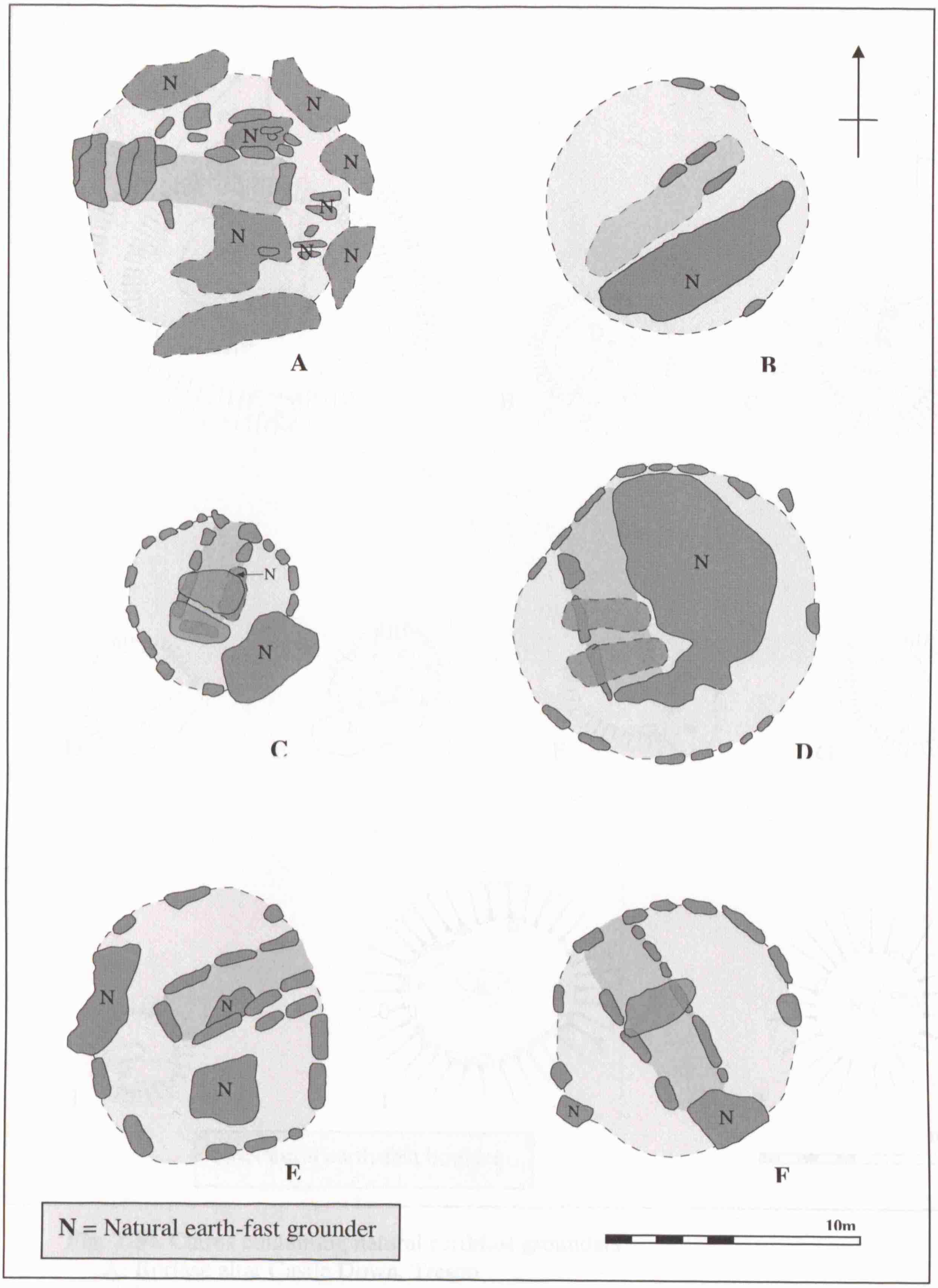


Fig.7.29. Plans of entrance graves
A: Porth Hellick Down, St Mary's; **B**: Mount Todden Down, St Mary's;
C: Porth Hellick Down, St Mary's; **D**: Porth Hellick Down, St Mary's;
E: Cruther's Hill, St Martin's; **F**: Normandy Down, St Mary's.

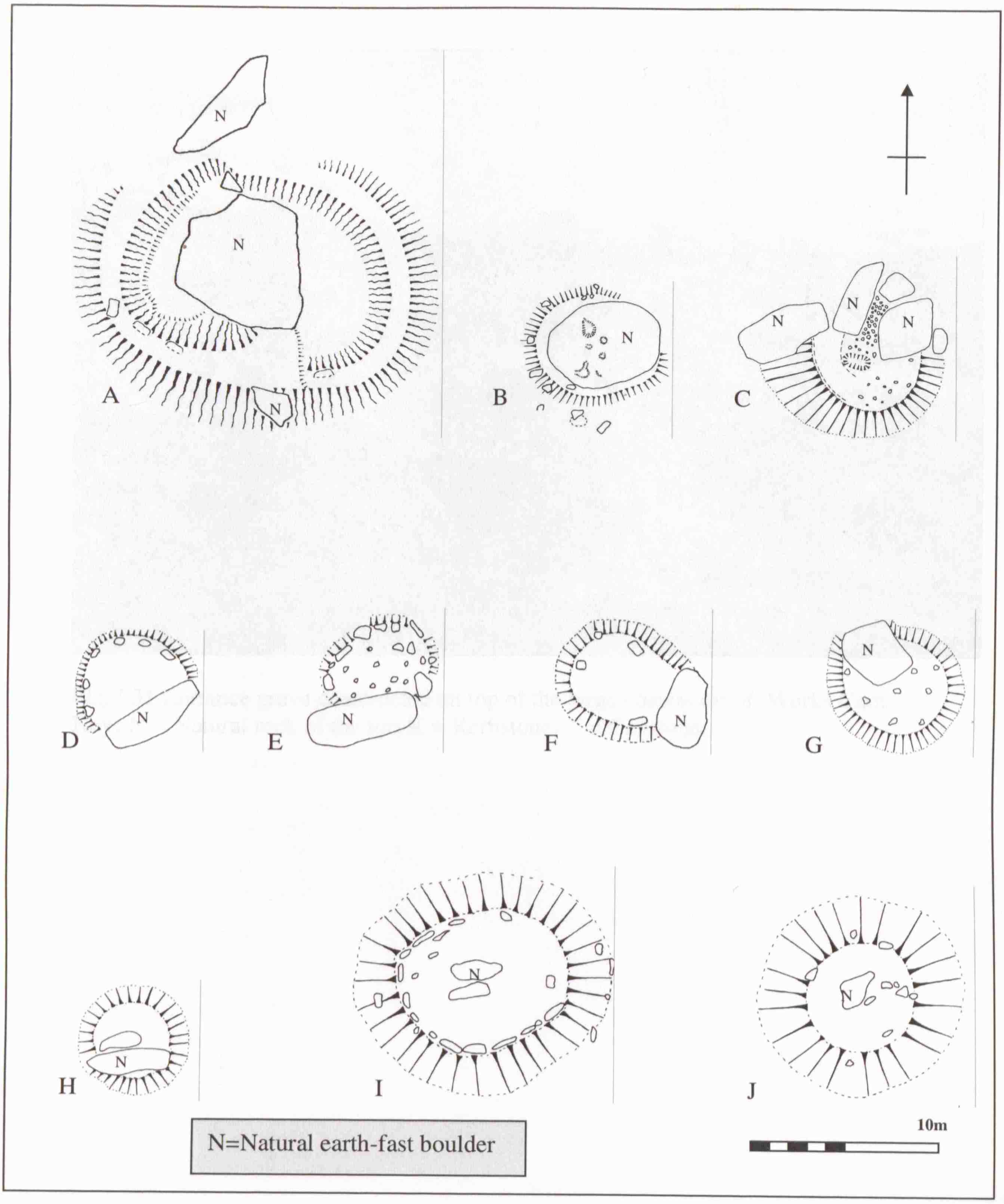


Fig. 7.30. Cairns containing natural earthfast grounders
A: Borlase altar Castle Down, Tresco
B: Wingletang Down, St Agnes
C: Shipman's Head Down, Bryher
D: Wingletang Down, St Agnes
E and F: Castle Down, Tresco
G, H, I and J: Shipman's Head Down, Bryher

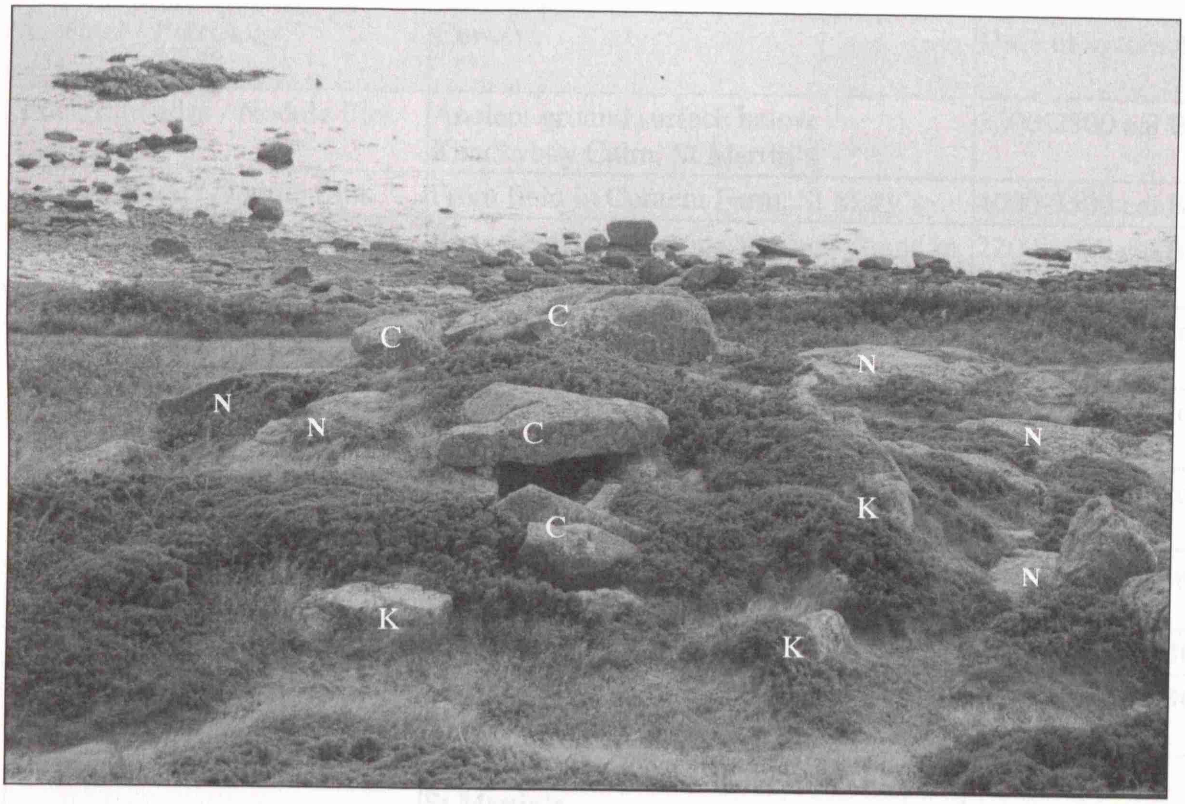


Fig.7.31 Entrance grave constructed on top of the large coastal tor of Works Carn.
Key: N = Natural rock of the tor; K = Kerbstone; C = Capstone

Artefact / Petrology	Context	Date of artefact
Stuck flint adze / Nodule flint	Ancient ground surface below Knackyboy Cairn, St Martin's	3000-2500 cal BC
Larnian blade / Nodule flint	From field in Content Farm, St Mary's	4000-3500 cal BC
Mace-head / Nodule Flint	Part of a cache of stone artefacts found in field at Normandy Farm, St Mary's	2200-1800 cal BC
Flint flake / Nodule flint	Cliff-face west side of Cruther's Hill, St Martin's	Unkown prehistoric
Flint flake / Nodule flint	Cliff-face west side of Cruther's Hill, St Martin's	Unkown prehistoric
Single platform core / Nodule flint	Cliff-face west side of Cruther's Hill, St Martin's	Unkown prehistoric
Flint flake / Nodule flint	Trench on the south side of Grimsby Porth, Tresco	Unkown prehistoric
Polished stone axe / Greenstone	Unidentified site on Gugh	3000-2500 cal BC
Polished stone axe / Altered Slate	Unidentified site on Peninnis Head, St Mary's	3500-2500 cal BC
Shalf-hold adze / Dolerite	In fissure of English Island Carn, St Martin's	2200-1800
Battle axe /Tourmaline Granite	Part of a cache of stone artefacts found in field at Normandy Farm, St Mary's	2200-1800 cal BC
Mace-head / Impure micaceous sandstone	Part of a cache of stone artefacts found in field at Normandy Farm, St Mary's	2200-1800 cal BC
Mace-head / Impure micaceous sandstone	Part of a cache of stone artefacts found in field at Normandy Farm, St Mary's	2200-1800 cal BC
Mace-head / Impure sandstone	Part of a cache of stone artefacts found in field at Normandy Farm, St Mary's	2200-1800 cal BC
Cupped pebble / Impure sandstone	Part of a cache of stone artefacts found in field at Normandy Farm, St Mary's	2200-1800 cal BC
Mace-head / Quartzite	Part of a cache of stone artefacts found in field at Normandy Farm, St Mary's	2200-1800 cal BC
Stone ball / Group I (Mount's Bay, Penzance)	? Abandonment of house 1, Nornour, Eastern Isles	2nd millennium BC
Stone ball / Micaceous sandstone	? Abandonment of house 1, Nornour	2nd millennium BC
Pounder / Micaceous sandstone	? Abandonment of house 1, Nornour	2nd millennium BC
Pounder / Greenstone	? Abandonment of house 1, Nornour	2nd millennium BC
Perforated disk / Quartz porphyry	? Abandonment of house 1, Nornour	2nd millennium BC

Fig. 8.1 Imported fine-stone artefacts from the Isles of Scilly
(Continued overleaf)

Artefact / Petrology	Context	Date of artefact
Perforated disk / Lamprophyre	? Abandonment of house 1, Nornour	2nd millennium BC
Cupped pebble / Lamprophyre	? Abandonment of house 1, Nornour	2nd millennium BC
Stone ball / Agate	Garden of Pilot's Retreat, St Mary's	Unknown prehistoric
Stone ball / Agate	Cairn on Penninis Head, St Mary's	2000-1600 cal BC (Associated with EBA metalwork)
Ovate ball / Cornelian	Old land surface at Perran Sands, St Mary's	Unknown prehistoric
Dolls head bead / Agate	Unidentified site on Garrison, St Mary's	Unknown prehistoric
Stone balls (x 3) / Cornelain	Unknown	Unknown prehistoric
A piece of brown pumice with abrasion marks on one surface	Found in the base of pit at East Porth, Samson	4th millennium BC (Associated with Hembury pottery)
A piece of brown pumice with hourglass perforation	Found within the chamber of the Great Tomb, an entrance grave on Porth Hellick Down, St Mary's	3000-1600 cal BC (Associated with comb and cord impressed pottery)
A disk of brown pumice with abrasion on one surface.	Found within a house in the western settlement of Nornour (Probably house 1?)	2nd millennium BC

Fig. 8.1 (cont.) Imported fine-stone artefacts from the Isles of Scilly.

Fig. 8.2 Stone balls from the abandonment layers of House 1, Nornour

Fig. 8.3 Part of a cache of fine-stone artefacts found in a field at Normandy Down, St Mary's (see Fig. for other items from this cache)

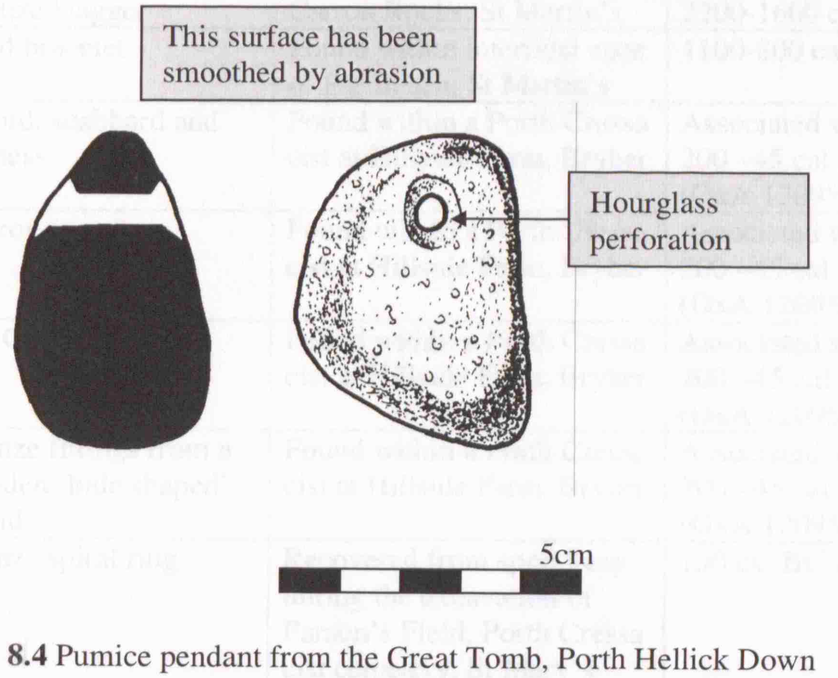


Fig. 8.4 Pumice pendant from the Great Tomb, Porth Hellick Down

Description	Context	Dating
Bronze shaft-holed axe	Unidentified site on St Mary's	1100-800 cal BC
Copper alloy awl	Midden at May's Hill, St Martin's	2500-1600 cal BC. (Found in association with comb and cord impressed pottery)
Copper alloy awl	Chamber of Obadiah's Barrow, St Martin's	2500-1600 cal BC (Found in association with comb and cord impressed pottery)
Terminal of bronze armlet	Found within thick deposit of cremated bone and ash at Knackyboy Cairn, St Martin's	2200-1800 cal BC
Clip from bronze earring	Found within thick deposit of cremated bone and ash at Knackyboy Cairn, St Martin's	2200-1800 cal BC
Copper alloy D-sectioned bar	Abandonment layers of structure below house 10 at Nornour	2nd millennium
Copper-alloy square-sectioned bar	Abandonment rubble of house 10 (second phase) below house 6 Nornour	2nd millennium
Copper-alloy square sectioned bar	Earliest occupation of house 5, Nornour	2nd millennium
Copper-alloy awl	Midden at May's Hill, St Martin's	2nd millennium BC
Bronze Dagger	Carron Rocks, St Martin's	2200-1600 cal BC
Gold bracelet	Found within intertidal zone of Par Beach, St Martin's	1100-800 cal BC
Sword, scabbard and harness	Found within a Porth Cressa cist at Hillside Farm, Bryher	Associated with radiocarbon date of: 200 –45 cal BC (OxA 12095; OxA 10255)
Mirror	Found within a Porth Cressa cist at Hillside Farm, Bryher	Associated with radiocarbon date of: 200 –45 cal BC (OxA 12095; OxA 10255)
Tin Object	Found within a Porth Cressa cist at Hillside Farm, Bryher	Associated with radiocarbon date of: 200 –45 cal BC (OxA 12095; OxA 10255)
Bronze fittings from a wooden 'hide shaped' shield	Found within a Porth Cressa cist at Hillside Farm, Bryher	Associated with radiocarbon date of: 200 –45 cal BC (OxA 12095; OxA 10255)
Bronze spiral ring	Recovered from spoil heap during the excavation of Parson's Field, Porth Cressa cist cemetery, St Mary's	150 cal BC-cal AD 100

Fig. 8.5 Prehistoric metalwork from Scilly
(Details of radiocarbon dates are given in Appendix 1)

Artefact	Context	Dating
Star faience bead	Found in thick deposit of cremated bone and ash within the chamber of Knackyboy Cairn, St Martin's	2100-1600 cal BC
Faience beads	Found in thick deposit of cremated bone and ash within the chamber of Knackyboy Cairn, St Martin's	2100-1600 cal BC
Glass beads	Found within Porth Cressa cists at Parson's Field, St Mary's	150 cal BC – cal AD 100
Amber bead	Found within Porth Cressa cist at Lawrence Bay, St Martin's	150 cal BC – cal AD 100

Fig. 8.6 Faience, glass and amber beads from Scilly

Artefact/ Petrology	Context	Date of artefact
Collared Urn / Non local clay with greenstone inclusions (probably from West Penwith).	Recovered from cliff-face at Pendrathen Bay, St Mary's	2100-1600 cal BC
12 x minature pots / Gabbroic clay	The abandonment layers of the central heath of House 1, Nornour	2nd millennium
2x Carinated bowls / Non local clay.	Abandonment layers from House 1 and House 5, Nornour	*c.* 300-100 cal BC
Pottery sherds / Gabbroic clay	Bar Point, St Mary's	1st millennium BC
Spindle whorl made from pottery sherd / Gabbroic	Abbey Farm, Tresco	Prehistoric
Base sherd / Gabbroic	Dial Rocks, Tresco	1st millennium BC
Hembury ware / ?Gabbroic	East Porth, Samson	4th millennium BC
Hembury ware / ?Gabbroic	Midden A, Annet	4th millennium BC
Hembury ware / ?Gabbroic	Old Quay, St Martin's	4th millennium BC
Hembury ware / ?Gabbroic	North Hill, Samson	4th millennium BC
Hembury ware / ?Gabbroic	Bant's Cairn, St Mary's	4th millennium BC

Fig.8.7 Imported pottery from Scilly